WARNING

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING WITH LIFT INSTALLATION AND OPERATION YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

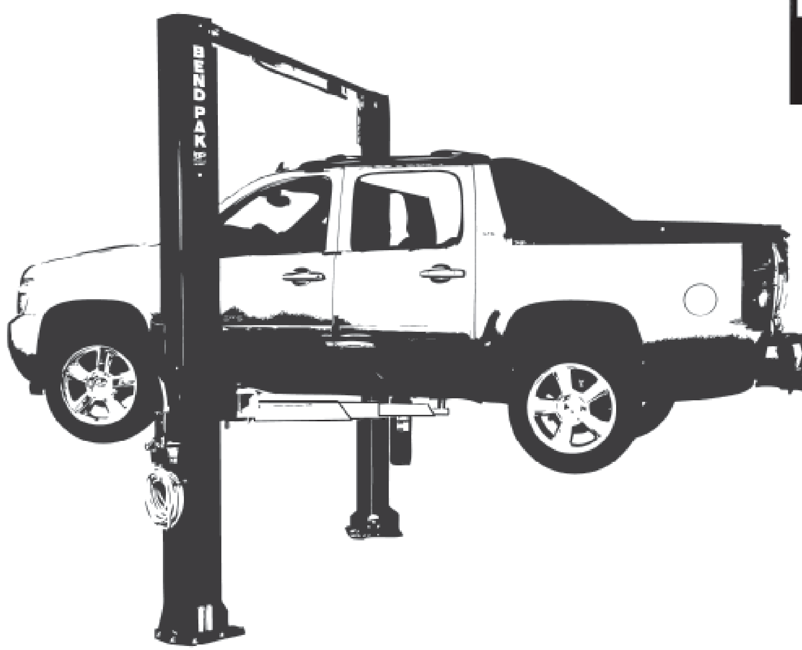
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P/N 5900047

INSTALLATION AND OPERATION MANUAL

10,000 POUND CAPACITY SURFACE MOUNTED TWO-POST LIFTS



MODELS:
XPR-10
XPR-10A
XPR-10-168
XPR-10A-168



RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed Bill of Lading is acknowledgement by the shipping carrier as receipt of this product as listed in your invoice as being in a good condition of shipment. If any of these goods listed on this Bill of Lading are missing or damaged, do not accept goods until the shipping carrier makes a notation on the freight bill of the missing or damaged goods. Do this for your own protection.

BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased with proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside. Keep this operation manual near the lift at all times. Make sure that <u>ALL USERS</u> read and understand this manual.

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Santa Paula, CA. 93060, USA
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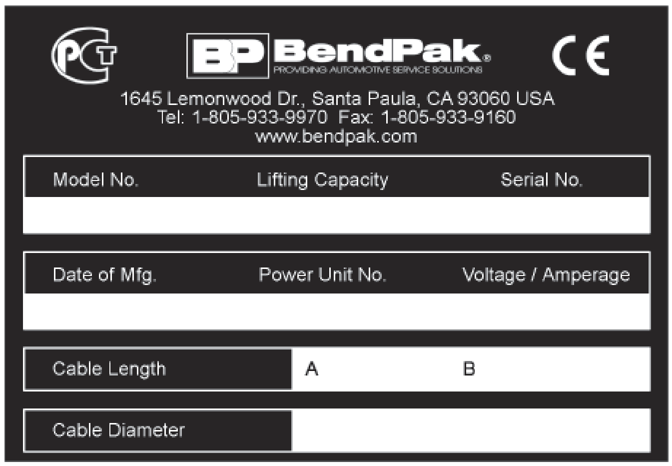
BendPak® PROVIDING AUTOMOTIVE SERVICE SOLUTIONS

10,000 POUND CAPACITY SURFACE MOUNTED TWO-POST LIFTS

This instruction manual has been prepared specifically for you. Your new lift is the product of over 40 years of continuing research, testing and development; it is the most technically advanced lift on the market today.

READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.

RECORD THE LIFT AND POWER UNIT INFORMATION HERE. YOU MAY FIND THIS INFORMATION LOCATED ON THE SERIAL NUMBER DATA PLATE AND POWER UNIT DATA PLATE



This information will be required when calling for parts or warranty issues.
Only replace parts with BendPak approved parts.

PRODUCT WARRANTY

BendPak two-post lifts are covered under warranty for five years on equipment structure, to be free of defects in material and workmanship. Power units, hydraulic cylinders, and all other assembly components (such as cables, chains, valves, switches etc.) are warrantied for one year against defects in material or workmanship under normal use. BendPak Inc. shall repair or replace at its discretion, within the warranty period, those parts returned to the factory freight, prepaid, which prove upon inspection to be defective. BendPak Inc. will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- defects caused by ordinary wear, abuse, misuse, negligence, shipping damage, improper installation, voltage or lack of required maintenance;
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A BENDPAK INC. PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

WARRANTY IS NOT VALID UNLESS WARRANTY CARD IS RETURNED.

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as a forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



DANGER !
Watch for this symbol as it means: Immediate hazards which will result in severe personal injury or death.



WARNING !
Watch for this symbol as it means: Hazards or unsafe practices which could result in severe personal injury or death.



CAUTION !
Watch for this symbol as it means: Hazards or unsafe practices which may result in minor personal injury, product or property damage.

OWNER'S RESPONSIBILITY

To maintain the lift and user safety, the responsibility of the owner is to read and follow these instructions:

- ♦ Follow all installation and operation instructions.
- ♦ Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- ♦ Carefully check the lift for correct initial function.
- ♦ Read and follow the safety instructions. Keep them readily available for machine operators.
- ♦ Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- ♦ Allow unit operation only with all parts in place and operating safely.
- ♦ Carefully inspect the unit on a regular basis and perform all maintenance as required.
- ♦ Service and maintain the unit only with authorized or approved replacement parts.
- ♦ Keep all instructions permanently with the unit and all decals on the unit clean and visible.

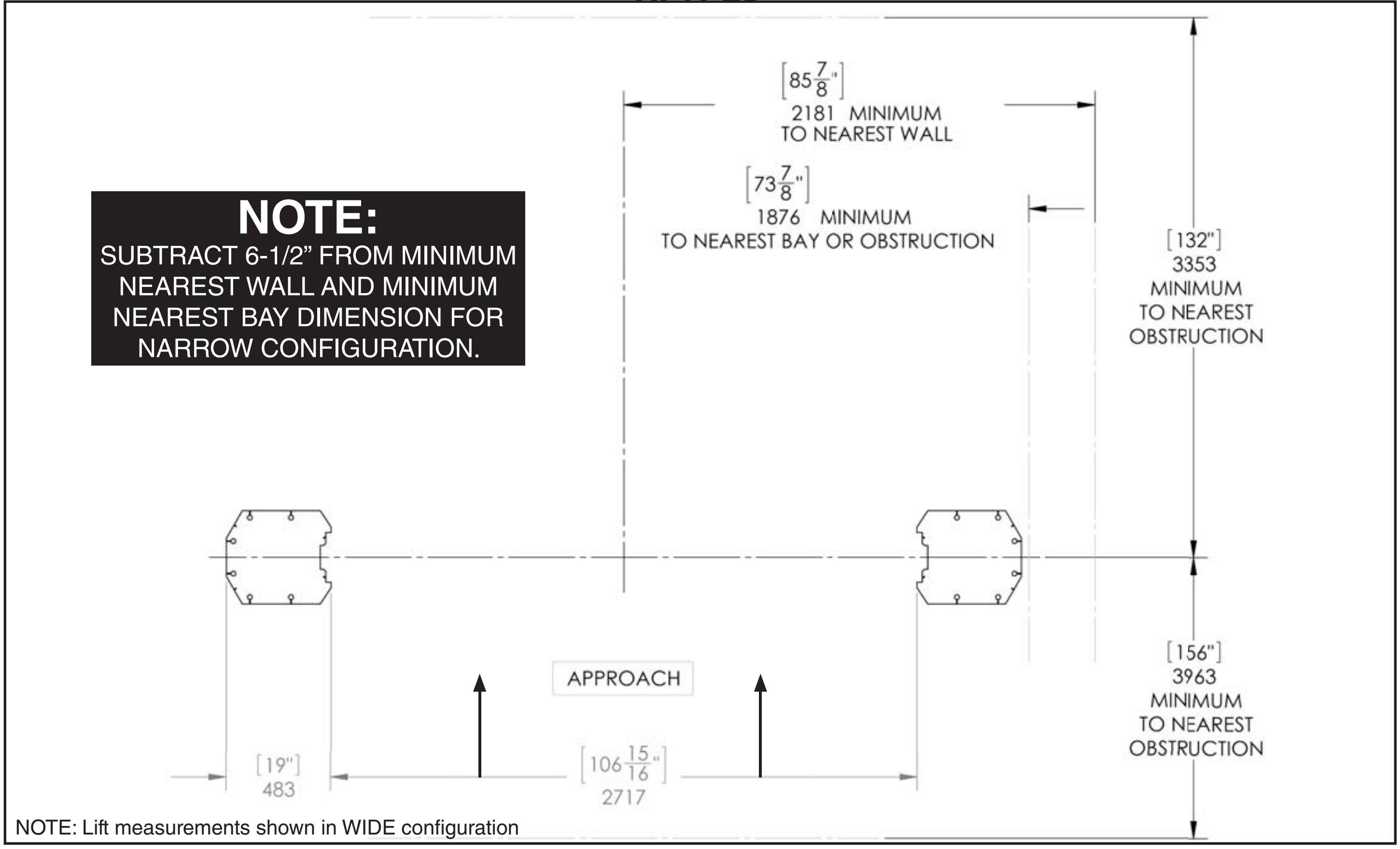
BEFORE YOU BEGIN

NOTIFY THE CARRIER AT ONCE if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. If the carrier will not do so, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

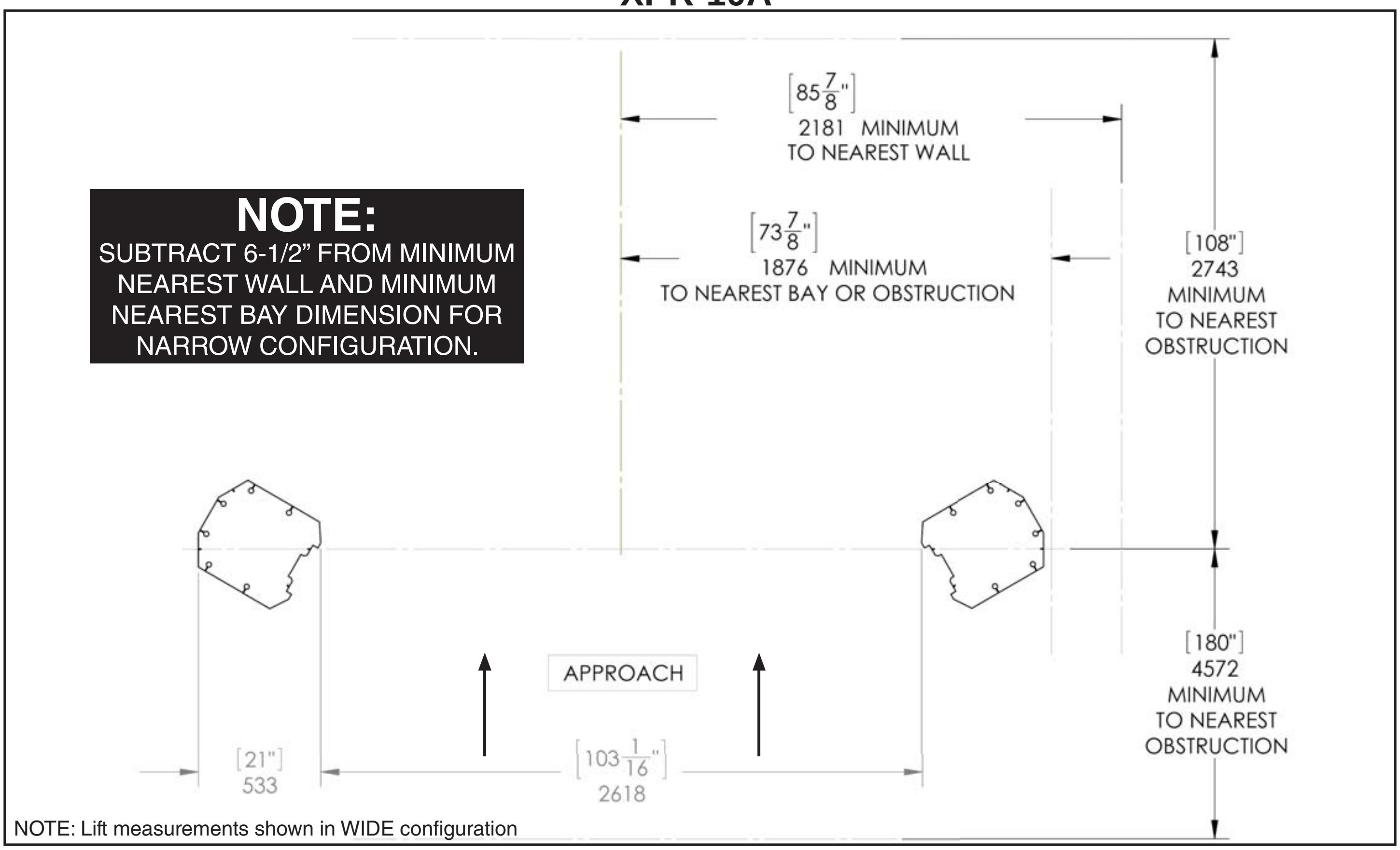
IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT. Support claim with copies of the Bill of Lading, freight bill, invoice, and photographs, if available. BendPak's willingness to assist in helping you process your claim does not make BendPak responsible for collection of claims or replacement of lost or damaged materials.

CLEARANCES

XPR-10



XPR-10A



LIFT HEIGHT CLEARNACE NOTE: There must be a 1" MIN distance from top of lift to nearest obstruction.

TABLE OF CONTENTS

INSTALLER / OPERATOR PLEASE READ AND FULLY UNDERSTAND. BY PROCEEDING YOU AGREE TO THE FOLLOWING.

♦ I have visually inspected the site where the lift is to be installed and verified the concrete to be in good condition and free of cracks or other defects. I understand that installing a lift on cracked or defective concrete could cause lift failure resulting in personal injury or death.

♦ I understand that a level floor is required for proper installation and level lifting.

♦ I understand that I am responsible if my floor is of questionable slope and that I will be responsible for all charges related to pouring a new level concrete slab if required and any charges.

♦ I understand that BendPak lifts are supplied with concrete fasteners meeting the criteria of the American National Standard “Automotive Lifts - Safety Requirements for Construction, Testing, and Validation” ANSI/ALI ALCTV-2006, and that I will be responsible for all charges related to any special, regional, structural, and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

♦ I will assume full responsibility for the concrete floor and condition thereof, now or later, where the above equipment model is to be installed. Failure to follow Danger, Warning, and Caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.

♦ I understand that BendPak lifts are designed to be installed in indoor locations only. Failure to follow installation instructions may lead to serious personal injury or death to operator or bystander or damage to property or lift.



DANGER

Failure to follow Danger, Warning, and Caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.

WARNING

Please read the entire manual prior to installation. Do not operate this machine until you have read and have understood all of the Danger, Warning and Caution alerts in this manual. For additional copies or further information, contact:

BendPak Inc.

1645 Lemonwood Dr.

Santa Paula, CA. 93060

1-805-933-9970

www.bendpak.com

INSTALLER / OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps makes installation and operation safer, however, it does not take the place of safe operating practices. Always wear durable work clothing during any installation and/or service activity. Shop aprons or shop coats may also be worn, however loose-fitting clothing should be avoided.

Tight-fitting leather gloves are recommended to protect the technician’s hands when handling parts. Sturdy leather steel-toe work shoes and oil resistant soles should be used by all service personnel to help prevent injury during typical installation and operation activities.



Eye protection is essential during installation and operation activities. Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing worker protection. Consideration should also be given to the use of hearing protection if service activity is performed in an enclosed area, or if noise levels are high.

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OR YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.

INTRODUCTION

1. Carefully remove the crating and packing materials. CAUTION! Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury.

2. Check the voltage, phase, and proper amperage requirements for the motor shown on the motor plate. Electrical work should be performed only by a certified electrician.

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely. Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that may fall and cause injury. When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions and all safety warnings before operating lift.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
4. Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
7. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
8. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
9. Adequate ventilation should be provided when working on operating internal combustion engines.
10. Keep hair, loose clothing, fingers, and all parts of body away from moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
11. DANGER! To reduce the risk of electric shock, do not use on wet surfaces or expose to rain. The power unit used on this lift contains high voltage. Disconnect power at the receptacle or at the circuit breaker switch before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service. or mark circuit breaker switch so that it cannot be accidentally switched on during service.





12. Use only as described in this manual. Use only manufacturer's recommended attachments.
13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
14. Consider work environment. Keep work area clean. Cluttered work areas invite injuries. Keep areas well lit.
15. Guard against electric shock. This lift must be grounded while in use to protect operator from electric schock. Never connect the green power cord wire to a live terminal. This is for ground only.
16. Only trained operators should operate this lift. All non-trained personnel should be kept away from the work area. Never let non-trained personnel come in contact with, or operate lift.
17. DO NOT override self-closing lift controls.
18. Clear area if vehicle is in danger of falling.
19. ALWAYS make sure the safeties are engaged before attempting to work on or near a vehcile.
21. WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.



22. MAINTAIN WITH CARE. Keep lift clean for better and safer performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.
23. Check for damaged parts. Check for alignment of moving parts, breakage of parts or any condition that may affect operation of lift. Do not use lift if any component is broken or damaged.
24. NEVER remove safety related components from the lift. Do not use lift if safety related components are missing or damaged.
23. STAY ALERT. Use common sense and watch what you are doing. Remember, SAFETY FIRST.

SAVE THESE INSTRUCTIONS

TOOLS REQUIRED

- Rotary Hammer Drill or Similar
- 3/4” Masonry Bit
- Hammer
- 4 Foot Level
- Open-End Wrench Set: SAE/Metric
- Socket And Ratchet Set: SAE/Metric
- Hex-Key / Allen Wrench Set
- Large Crescent Wrench
- Large Pipe Wrench
- Crow Bar
- Chalk Line
- Medium Flat Screwdriver
- Tape Measure: 25 Foot Minimum
- Needle Nose Pliers

IMPORTANT NOTICE

THESE INSTRUCTIONS MUST BE FOLLOWED TO INSURE PROPER INSTALLATION AND OPERATION OF YOUR LIFT. FAILURE TO COMPLY WITH THESE INSTRUCTIONS CAN RESULT IN SERIOUS BODILY HARM AND VOID PRODUCT WARRANTY. MANUFACTURER WILL ASSUME NO LIABILITY FOR LOSS OR DAMAGE OF ANY KIND, EXPRESSED OR IMPLIED, RESULTING FROM IMPROPER INSTALLATION OR USE OF THIS PRODUCT.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION

STEP 1
(Selecting Site)

Before installing your new lift, check the following.

1. LIFT LOCATION: Always use architects plans when available. Check layout dimension against floor plan requirements making sure that adequate space is available.

2. OVERHEAD OBSTRUCTIONS: The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.

3. DEFECTIVE FLOOR: Visually inspect the site where the lift is to be installed and check for cracked or defective concrete.

4. Lift is designed for INDOOR INSTALLATION ONLY.

DANGER

- DO NOT install or use this lift on any asphalt surface or any surface other than concrete.
- DO NOT install or use this lift on expansion seams or on cracked or defective concrete.
- DO NOT install or use this lift on a second / elevated floor without first consulting a building architect.
- DO NOT install or use this lift outdoors.

STEP 2
(Floor Requirements)

WARNING

This lift must be installed on a solid level concrete floor with no more than 3-degrees of slope. Failure to do so could cause personal injury or death.

A level floor is suggested for proper use and installation and level lifting. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab.

CONCRETE SPECIFICATIONS

LIFT MODEL	CONCRETE REQUIREMENTS
XPR-10	4” Min. Thickness / 3,000 PSI
XPR-10A	4” Min. Thickness / 3,000 PSI
XPR-10-168	4” Min. Thickness / 3,000 PSI
XPR-10A-168	4” Min. Thickness / 3,000 PSI

DANGER

DANGER!

ALL MODELS MUST BE INSTALLED ON 3000 PSI CONCRETE ONLY CONFORMING TO THE MINIMUM REQUIREMENTS SHOWN ABOVE. NEW CONCRETE MUST BE ADEQUATELY CURED FOR A MINIMUM OF 28 DAYS.

IMPORTANT NOTE

BendPak lifts are supplied with installation instructions and concrete fasteners meeting the criteria as prescribed by the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-2006. Lift buyers are responsible for any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

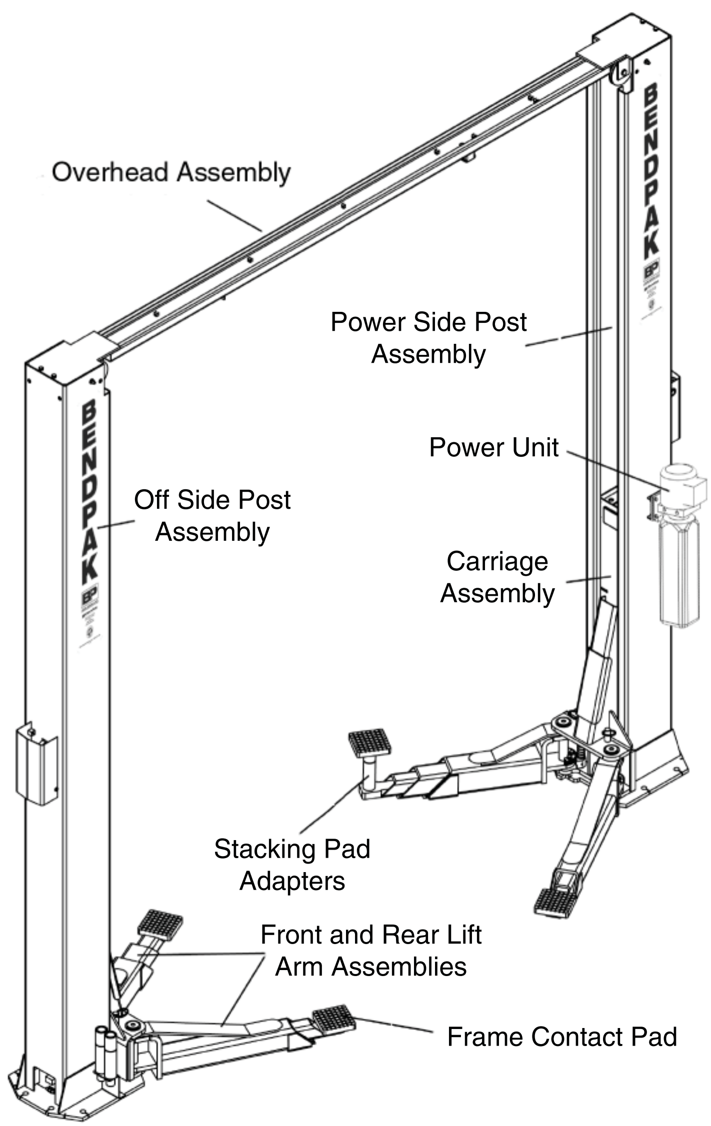
⚠ DANGER

When removing the lift from shipping angles, pay close attention as the posts can slide and can cause injury. Prior to removing the bolts make sure the posts are held securely by a fork lift or some other heavy lifting device.

PARTS INVENTORY

Be sure to take a complete inventory of parts prior to beginning installation.

Description	Qty
Overhead Assembly	1
Front Lift Arm Assembly	2
Rear Lift Arm Assembly	2
Off Side Post with Carriage Assembly	1
Power Side Post with Carriage Assembly	1
Hydraulic Cylinder	2
Parts Box (Packing List Enclosed)	1
Parts Bag (Packaged in Part Box)	1
Hydraulic Power Unit	1



STEP 3

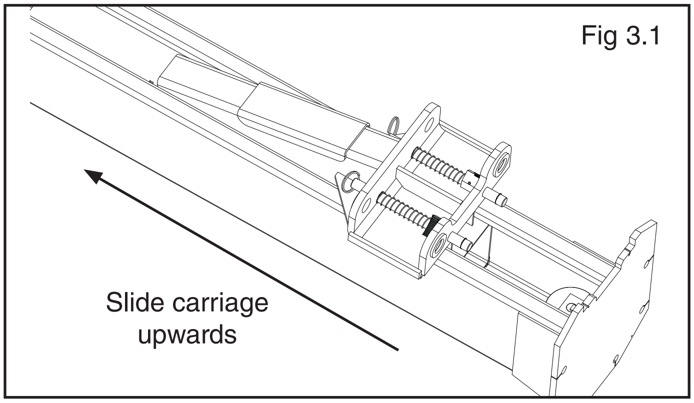
(Post Preparation)

COMPLETE THE FOLLOWING
PRIOR TO RAISING THE POSTS

NOTE:
DETERMINE DESIRED LOCATION AND WIDTH LAYOUT BEFORE RAISING POSTS. REFER TO LAYOUT CHARTS ON PAGES 13-14.

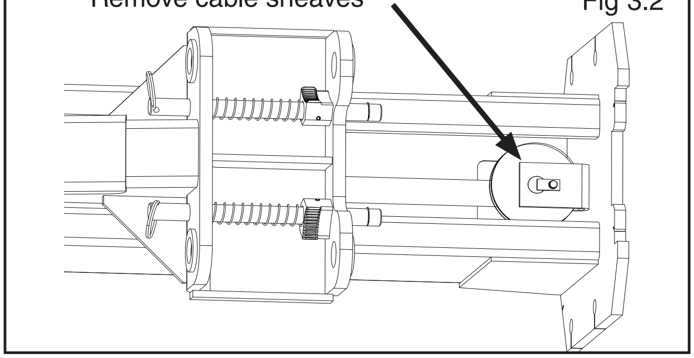
1. Prior to raising posts, slide each carriage upwards to aid in sheave removal and equalizer cable routing.

Fig 3.1



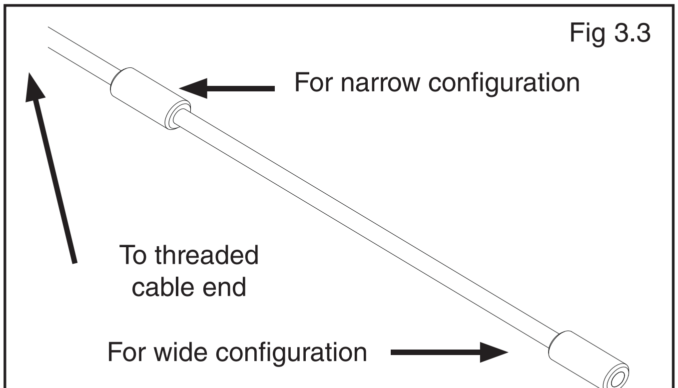
2. Remove the cable sheaves located at the inside bottom of each post.

Fig 3.2



3. Identify the correct cable button on the end of each equalizer cable that corresponds to your desired lift configuration. Route the button around the bottom sheave and secure at the carriage lock plate located inside each carriage.

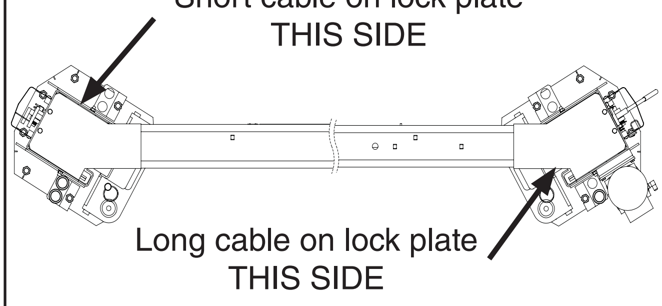
Fig 3.3



4. Route threaded end of cable upwards through the bottom of the carriage. Leave excess cable resting on top of carriage until further steps are required. (See Fig 3.8)

NOTE:
SYMMETRICAL MODELS BOTH CABLES ARE SAME LENGTH. ASYMMETRIC MODELS HAVE TWO DIFFERENT LENGTH CABLES. (SEE FIG. 3.4)

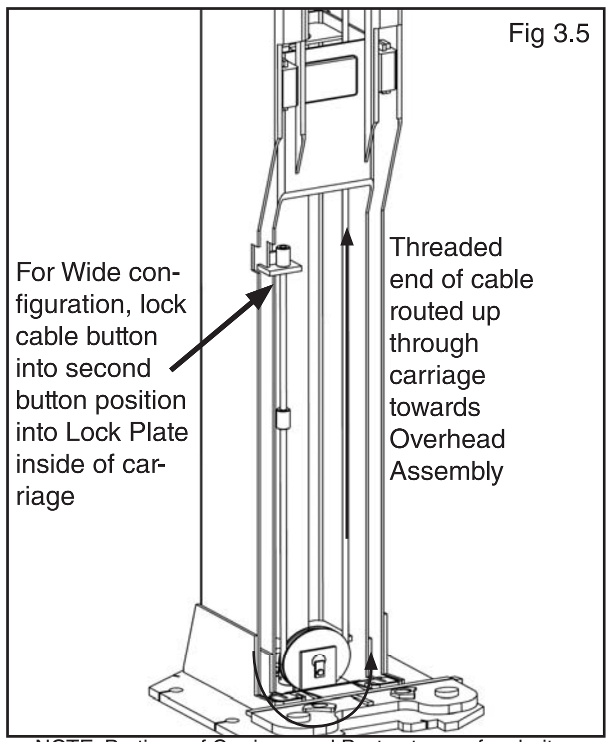
Fig 3.4



For Asymmetric Models Only

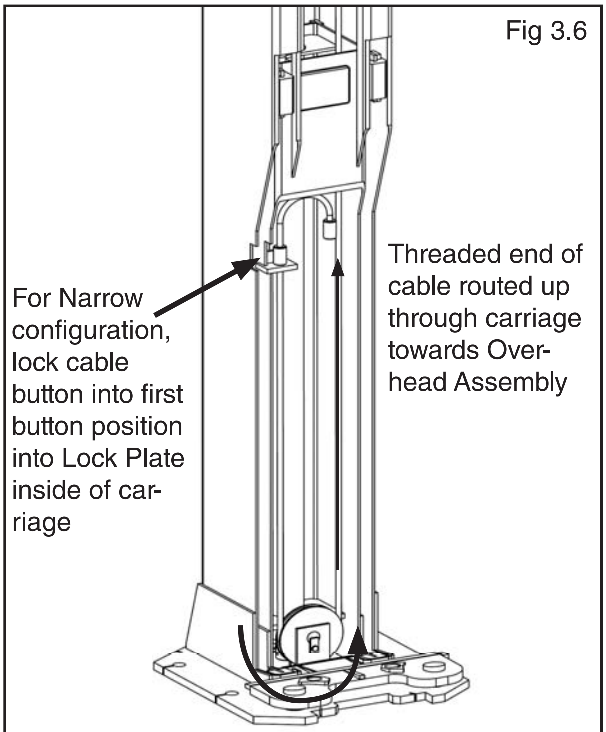
5. Install the cylinder fittings in cylinder ports. Pay attention when installing the fittings to ensure that each fitting points towards the side of the post that the hose retainer clips are located on. (See Fig 3.7)

Fig 3.5

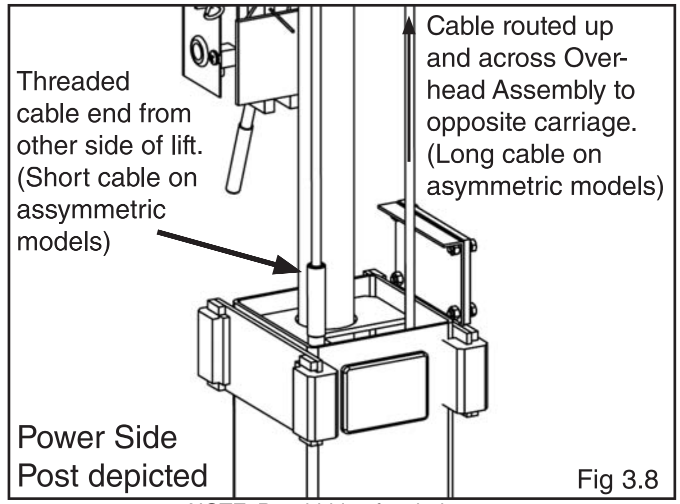


NOTE: Portions of Carriage and Post cut away for clarity

NOTE FOR XPR-10 MODELS:
FOR NARROW CONFIGURATION USE THE BUTTON LOCATED AT 12" ABOVE CABLE END. FOR WIDE CONFIGURATION USE THE BUTTON LOCATED ON THE END OF THE CABLE.

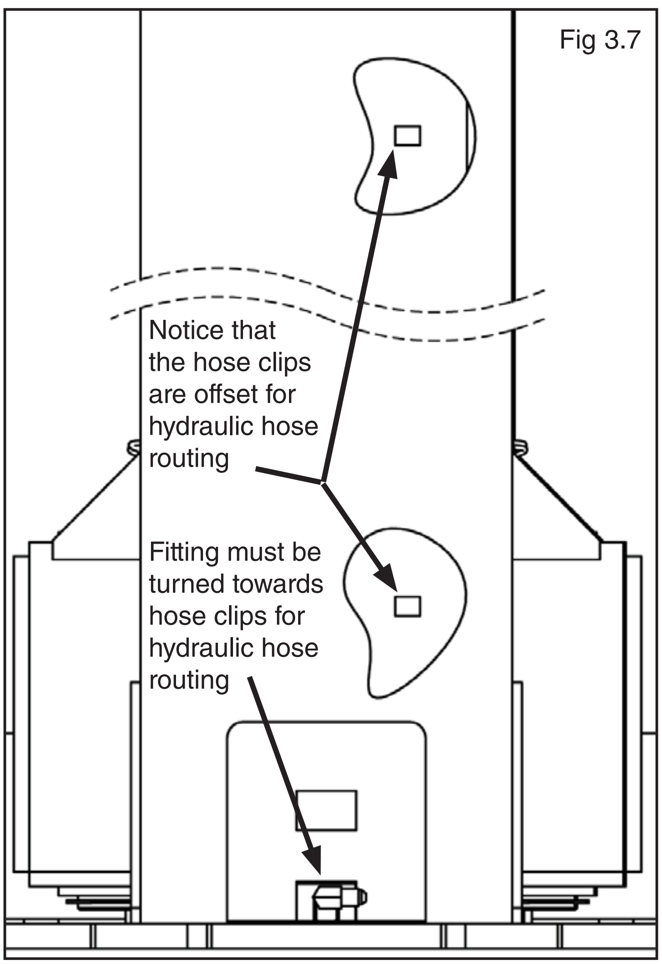


NOTE: Portions of Carriage and Post cut away for clarity
NOTE: Second Cable Button should be tucked away from the lifting cable route. Second Cable Button in Fig 3.5 shown for representational purposes only.

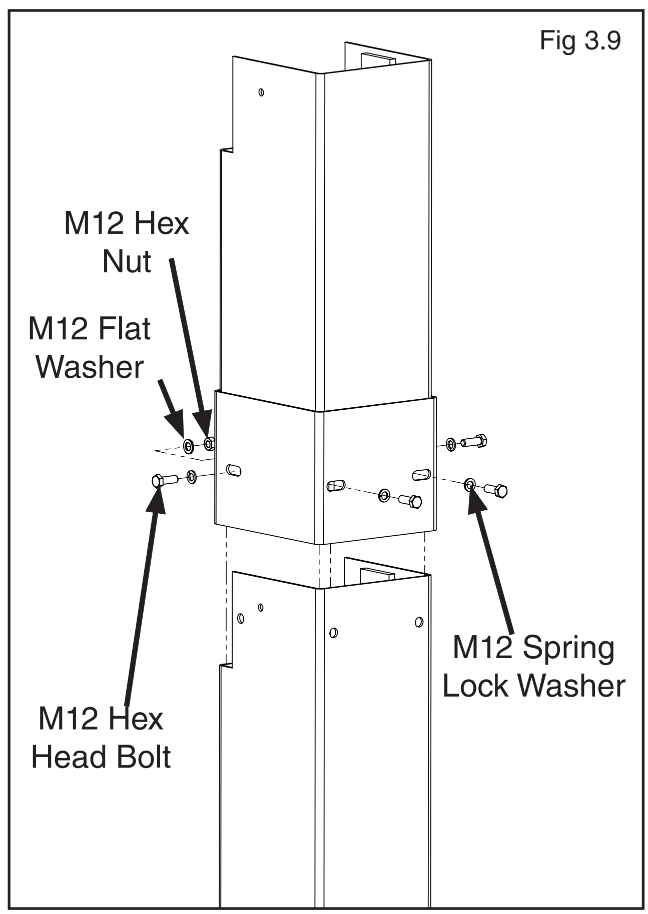


NOTE: Post hidden for clarity

NOTE FOR XPR-10-168 MODELS:
FOR XPR-10-168 AND XPR-10A-168 MODELS, FIT EXTENSION WELDMENTS TO POST ASSEMBLY IN THIS STEP FOR EASE OF INSTALLATION AND BOLT TOGETHER AS SHOWN BELOW WITH M12 HARDWARE.



NOTE: Portions of Post cut away for clarity



NOTE:
BE SURE TO ORIENT THE HYDRAULIC FITTINGS ON CYLINDER AS SHOWN IN FIG 3.7.

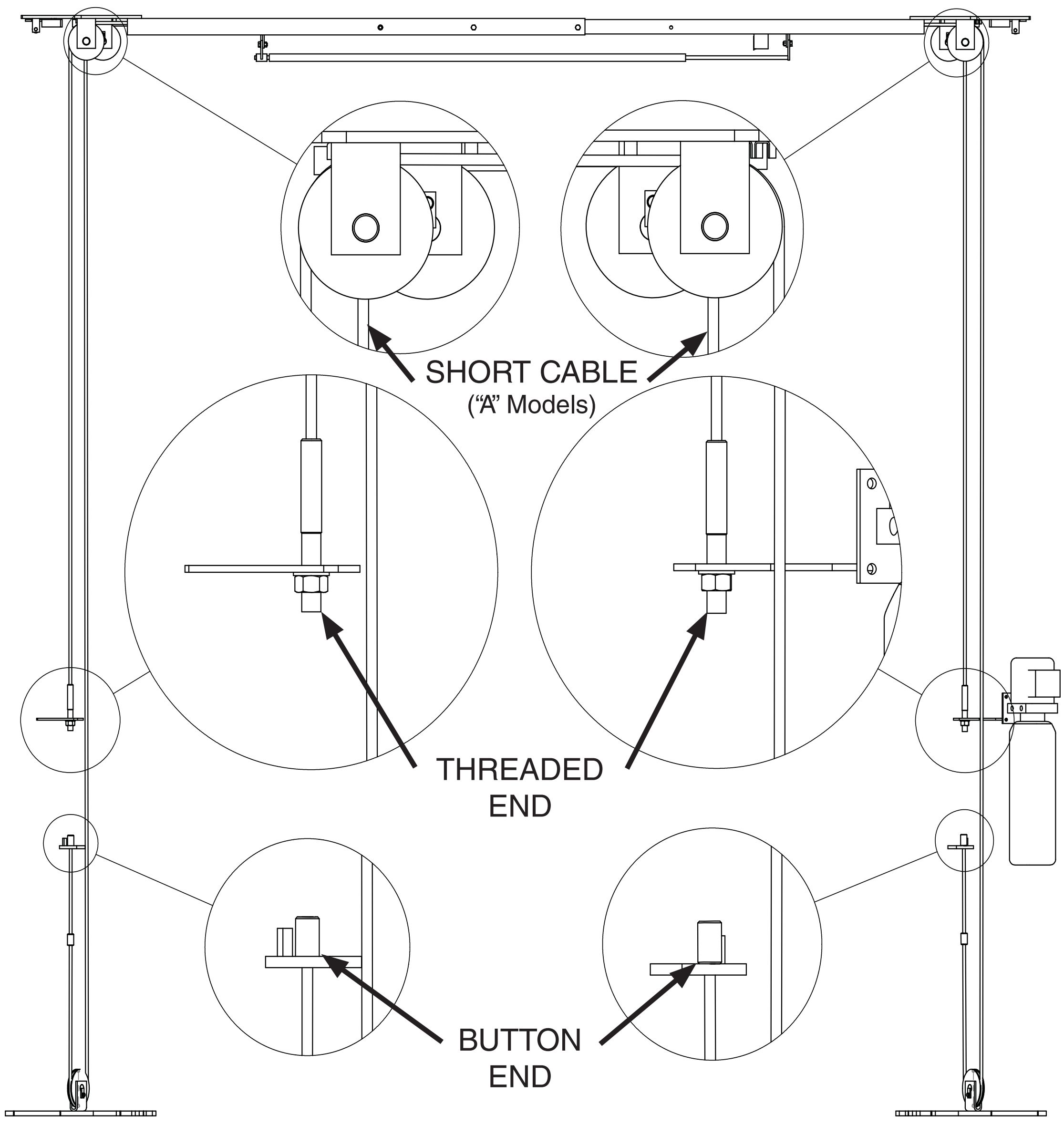
6. Route both hoses in their respective posts **PRIOR** to raising posts to their vertical position. When routing the hydraulic hoses through the post, make sure to route through the hose clips welded inside each post. Make sure that the hoses are clear of any moving parts. It may be necessary to tie hoses clear of obstructions by using nylon tie straps or wire. Refer to Step 10 for further instructions.

⚠ CAUTION

CAUTION !
BE SURE TO ROUTE THE HYDRAULIC HOSES THROUGH THE HOSE CLIPS WELDED INSIDE EACH POST.

EQUALIZER CABLE ROUTING

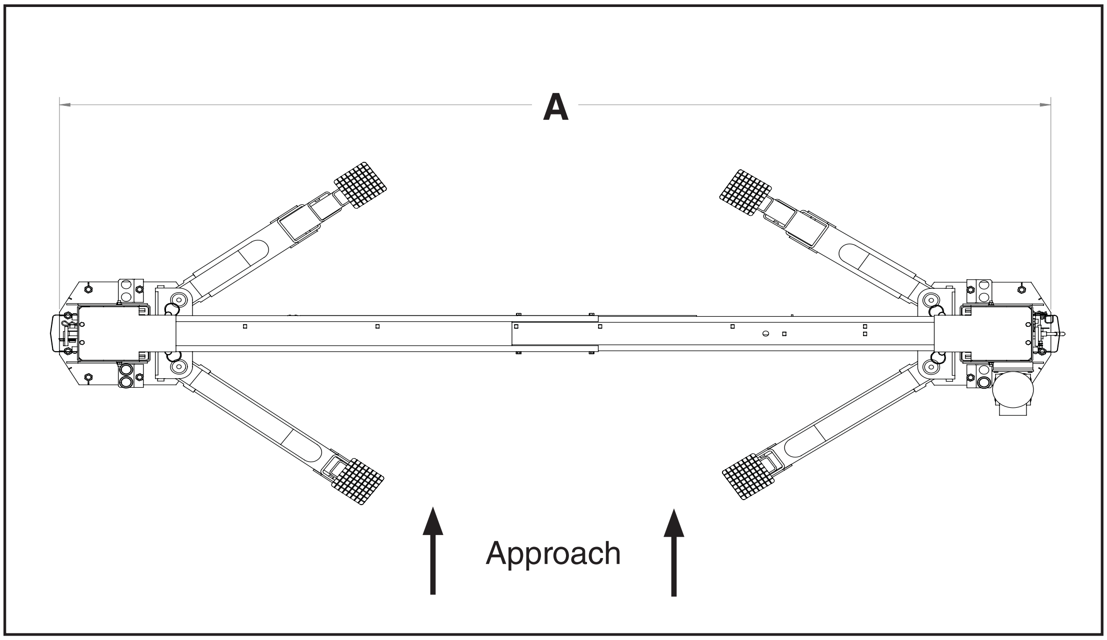
Fig 3.10



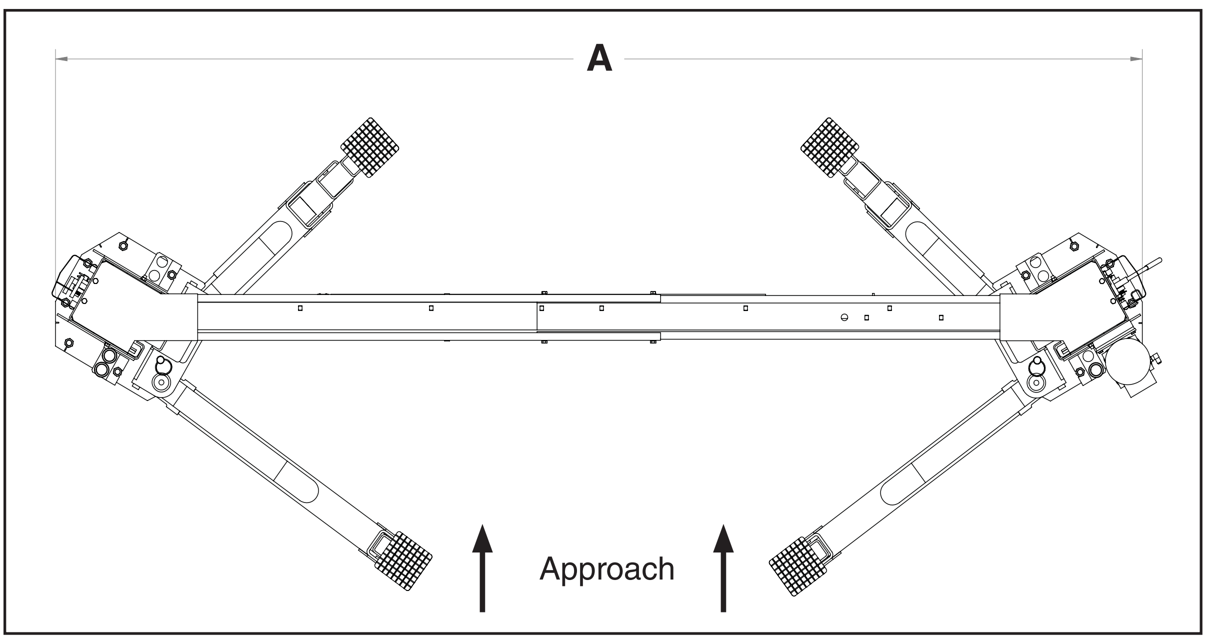
XPR-10A wide configuration shown.

NOTE:
“XPR -10” models: both Equalizer Cables are the same length.
Overhead Assembly sheaves ARE NOT staggered.
“XPR-10A” models: have one short and one long Equalizer Cable.
Overhead Assembly sheaves ARE staggered.

FLOOR PLAN



Model	Configuration	A	Capacity
XPR-10	Narrow	3353 mm / 132”	10,000 LBS
XPR-10	Wide	3683 mm / 145”	10,000 LBS



Model	Configuration	A	Capacity
XPR-10A	Narrow	3354 mm / 132”	10,000 LBS
XPR-10A	Wide	3684 mm / 145”	10,000 LBS

FLOOR PLAN

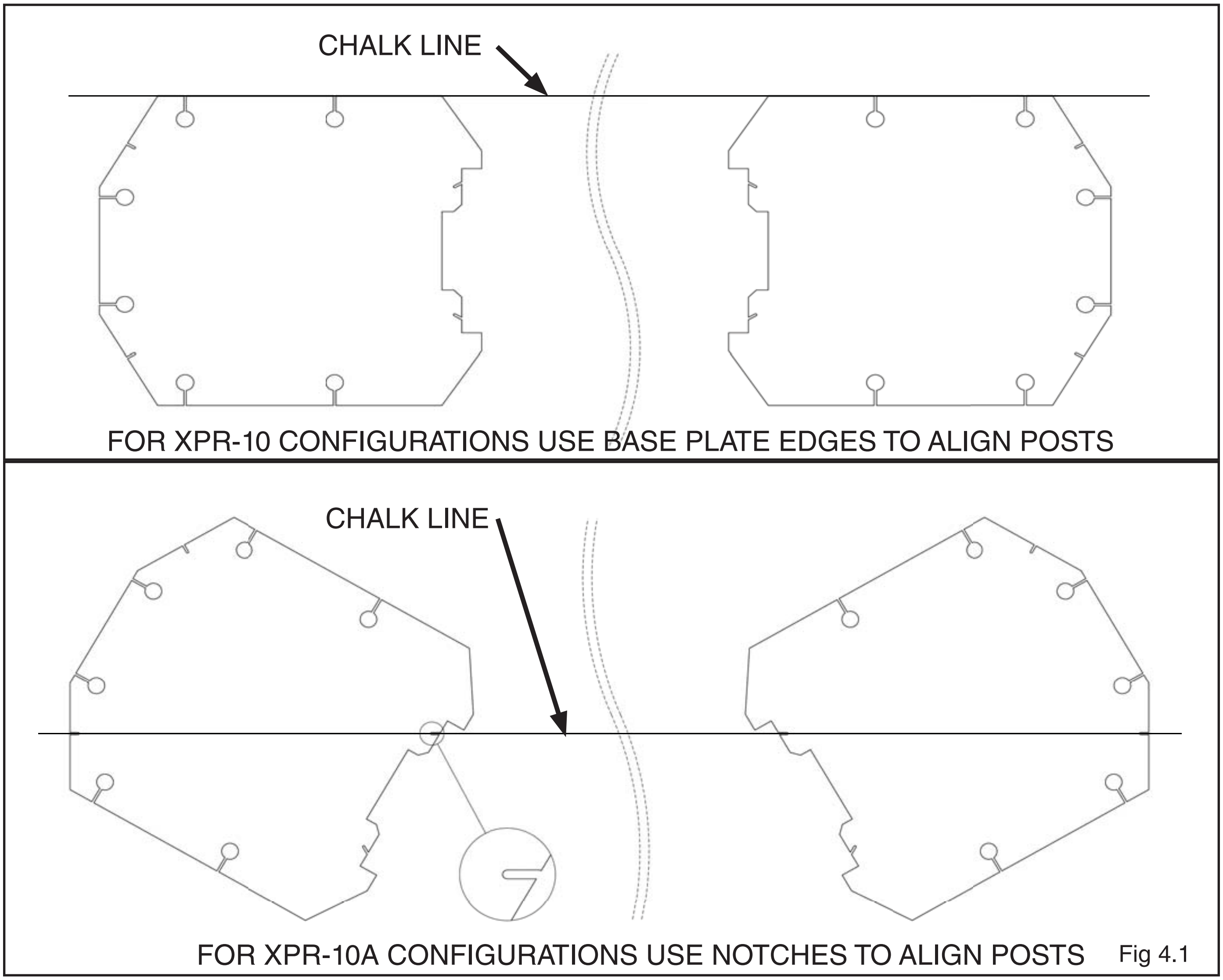


Fig 4.1

STEP 4
(Site Layout)

1. Determine which side of the lift will be the approach side.

2. Now determine where the power unit will be located. The POWER SIDE column has the power unit mounting bracket attached to the side.

3. Use the chart on page 13 to determine which lift width layout you would like to use.

4. Once a location is determined, use a carpenters chalk line to layout an alignment line for the post locations. Keep all dimensions square within 1/8" (3mm) or malfunctioning of the lift can occur. (See Fig 4.1)

5. After the post locations are properly marked, use chalk or crayon to make an outline of the posts on the floor at each post location using the post base plates as a template.

6. **CHECK ALL DIMENSIONS TWICE** and make sure that the layout is perfectly square.

STEP 5
(Installing the POWER SIDE post)

NOTE:
BENDPAK LIFTS ARE SUPPLIED WITH INSTALLATION INSTRUCTIONS AND CONCRETE FASTENERS MEETING THE CRITERIA AS PRESCRIBED BY THE AMERICAN NATIONAL STANDARD "AUTOMOTIVE LIFTS - SAFETY REQUIREMENTS FOR CONSTRUCTION, TESTING, AND VALIDATION" ANSI/ALI ALCTV-2006. LIFT BUYERS ARE RESPONSIBLE FOR ANY SPECIAL REGIONAL STRUCTURAL AND/OR SEISMIC ANCHORING REQUIREMENTS SPECIFIED BY ANY OTHER AGENCIES AND/OR CODES SUCH AS THE UNIFORM BUILDING CODE (UBC) AND/OR INTERNATIONAL BUILDING CODE (IBC).

1. Before proceeding, double the check measurements and make certain that the base plate of each post are aligned with the chalk line.

2. Using the baseplate on the POWER SIDE post as a guide, drill each anchor hole in the concrete (approximately 4” deep for 10K models and 6” deep for 12K and 15K; 8” for 18K models) using a rotary hammer drill and 3/4” concrete drill-bit. To ensure full holding power, do not ream the hole or allow the drill to wobble. (See Fig. 5.1)

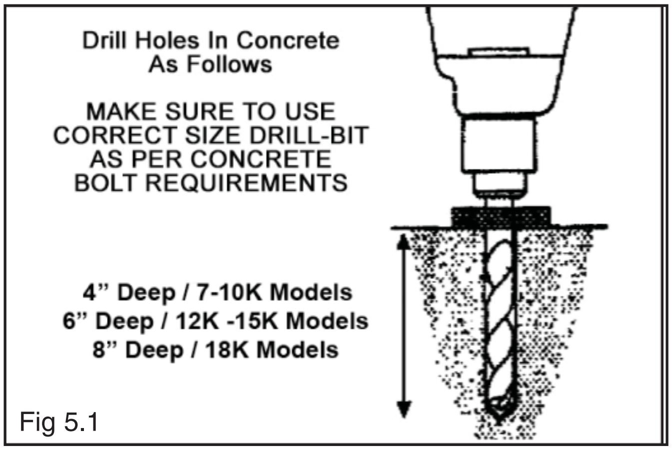
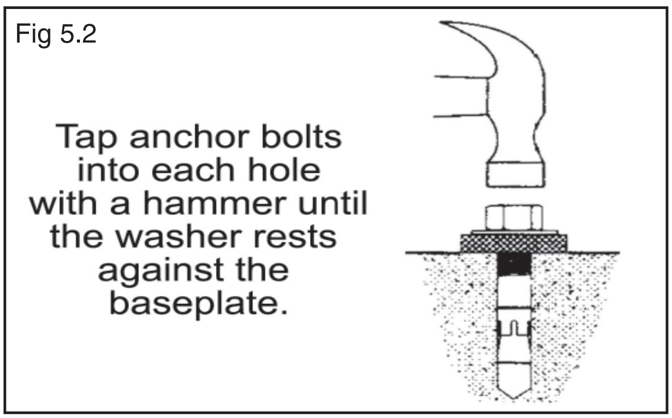


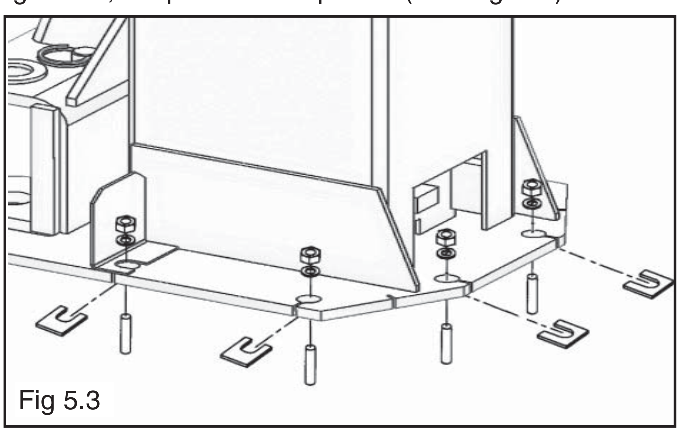
Fig 5.1

3. After drilling, remove dust thoroughly from each hole making certain that the posts remain aligned with the chalk line.

4. Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. If shimming is required be sure that enough threads are left exposed. (See Fig. 5.2)

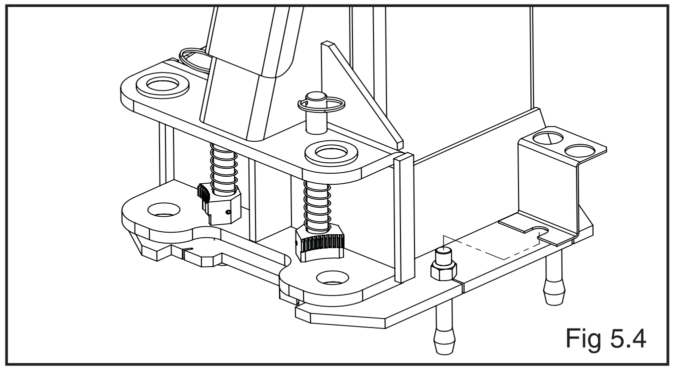
Fig 5.2


5. If shimming is required, insert the shims as necessary under the base plate so that when the anchor bolts are tightened, the posts will be plumb. (See Fig. 5.3)


Fig 5.3

6. If installing the optional foot guards, place foot guards on left and right side as shown. (See Fig 5.4)

NOTE:
TO EASE INSTALLATION OF THE OVERHEAD ASSEMBLY, IT HELPS TO KEEP THE ANCHOR BOLTS LOOSE ON ONE OF THE POSTS UNTIL THE OVERHEAD ASSEMBLY IS MOUNTED.


Fig 5.4

7. With the foot guards, shims and anchor bolts in place, tighten by securing the nut to the base then turning 3-5 full turns clockwise (90 ft-lbs.). **DO NOT** use an impact wrench for this procedure. (See Fig. 5.5)

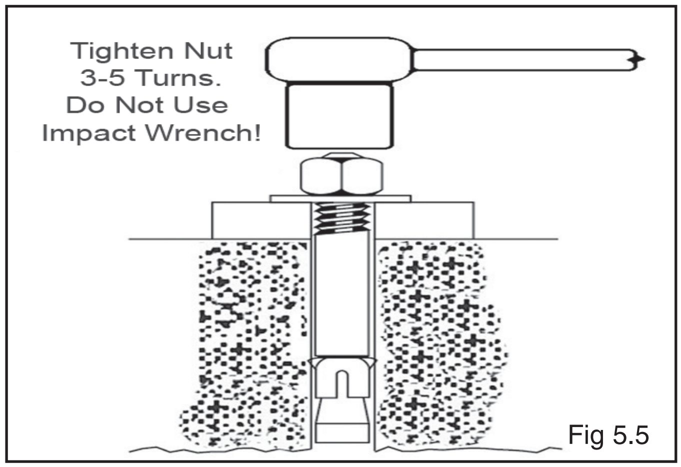


Fig 5.5

STEP 6
(Installing the OFF SIDE post)

1. Position the OFF SIDE post at the designated chalk locations and secure post to floor following the same procedures as outlined in STEP 5; Paragraphs 1-6.

NOTE:
TO EASE THE INSTALLATION OF THE OVERHEAD ASSEMBLY, IT HELPS TO KEEP THE ANCHOR BOLTS LOOSE ON ONE OF THE POSTS UNTIL THE OVERHEAD ASSEMBLY IS MOUNTED.

STEP 7
(Mounting the Overhead Assembly)

NOTE:
IN ORDER TO ROUTE THE EQUALIZER CABLES THE SHEAVES MUST BE REMOVED.

1. Remove all of the equalizer cable sheaves in preparation for the installation of the Overhead Assembly.

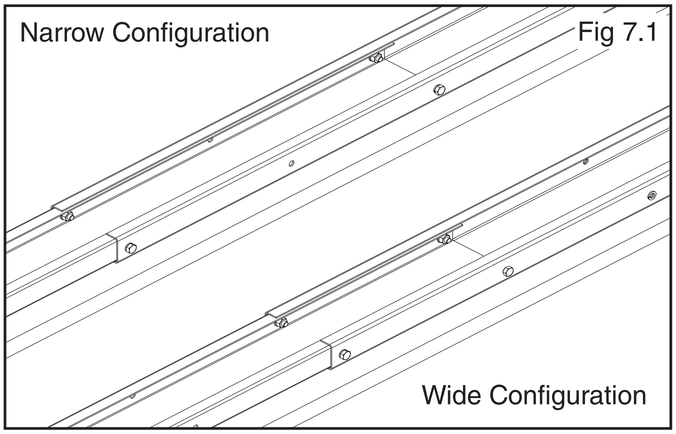


Fig 7.1

2. Adjust the Overhead Assembly width to match either the Narrow or Wide configuration, and loosely tighten bolts. (See Fig 7.1)

3. Using a lifting device, raise the Overhead Assembly into position on top of the posts. Bolt Overhead Assembly to the posts using the provided M10 hex head bolts, nuts and washers.

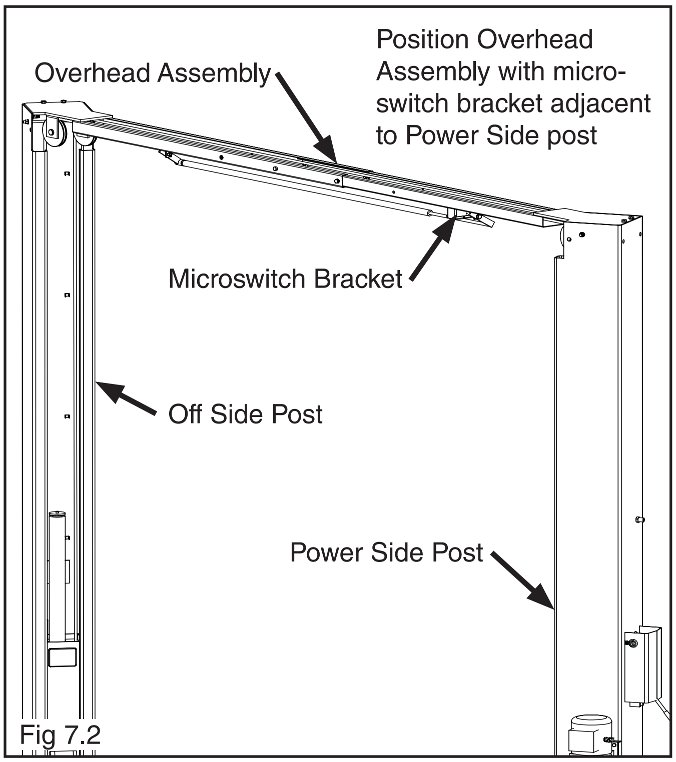


Fig 7.2

4. **<u>YOU MUST</u>** POSITION THE SWITCH ENCLOSURE ADJACENT TO POWER SIDE POST. (See Fig. 7.2)

5. Tighten the Overhead Assembly bolts.

⚠ WARNING

WARNING !
IF THE ANCHOR BOLTS WERE LOOSENED TO AID ON THE INSTALLATION OF THE TOP TROUGH, TIGHTEN ANCHOR BOLTS AS INDICATED IN STEP 5 ITEMS 4 - 7.

STEP 8
(Mounting the Hydraulic Power Unit)

1. Attach the power unit to the POWER SIDE post. Install the vibration dampener between the power unit and the power unit mounting plate on the Power Side post, using four M8 hex head bolts and nuts supplied. (See Fig 8.1)

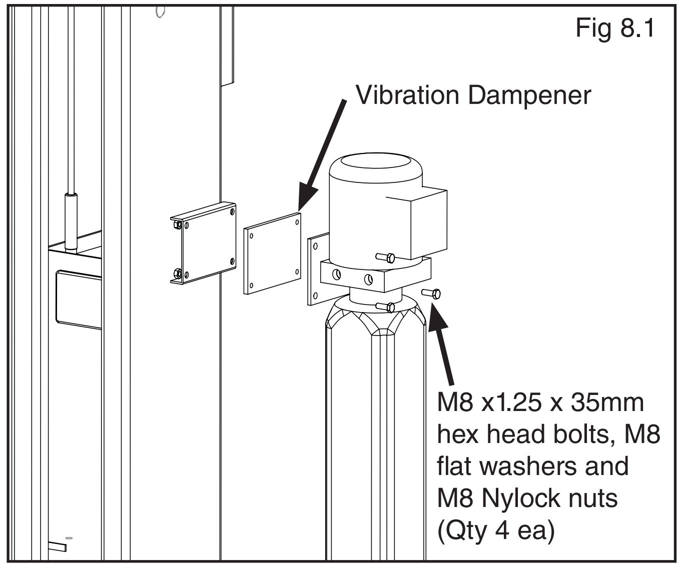


Fig 8.1

2. Fill the reservoir with 10 WT. HYDRAULIC OIL OR DEXRON TYPE III ATF, approximately four gallons**.** Make sure the funnel used to fill the Power Unit is clean.

Do not connect power unit hydraulic hose assembly at this time.

3. The standard power unit for your lift is 220 volt, 60HZ, single phase. All wiring must be performed by a certified electrician only. SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS.

⚠ DANGER

DANGER !
ALL WIRING MUST BE PERFORMED BY A LICENSED ELECTRICIAN.



DANGER!
DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITHOUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.

WARNING

WARNING!

DO NOT RUN POWER UNIT WITHOUT OIL. DAMAGE TO POWER UNIT PUMP CAN OCCUR.
THE POWER UNIT MUST BE KEPT DRY. DAMAGE TO POWER UNIT CAUSED BY WATER OR OTHER LIQUIDS SUCH AS DETERGENTS, ACID ETC., IS NOT COVERED UNDER WARRANTY.
OPERATE LIFT ONLY BETWEEN TEMPERATURES OF 41 °- 104° F.

ANY IMPROPER ELECTRICAL INSTALLATION MAY DAMAGE POWER UNIT MOTOR AND RESULTING DAMAGE WILL NOT BE COVERED UNDER WARRANTY.
MOTOR CAN NOT RUN ON 50HZ WITHOUT A PHYSICAL CHANGE IN MOTOR.
USE A SEPARATE CIRCUIT BREAKER FOR EACH POWER UNIT.
PROTECT EACH CIRCUIT WITH TIME DELAY FUSE OR CIRCUIT BREAKER.
FOR 208-230 VOLT, SINGLE PHASE, USE A 25 AMP FUSE.
FOR 208-230 VOLT, THREE PHASE, USE A 20 AMP FUSE.
FOR 380-440 VOLT, THREE PHASE, USE A 15 AMP FUSE.

STEP 9
(Installing the Safeties and Safety Cable)

1. Install safety weldments on to each respective post. (See Figs 9.1 - 9.2)

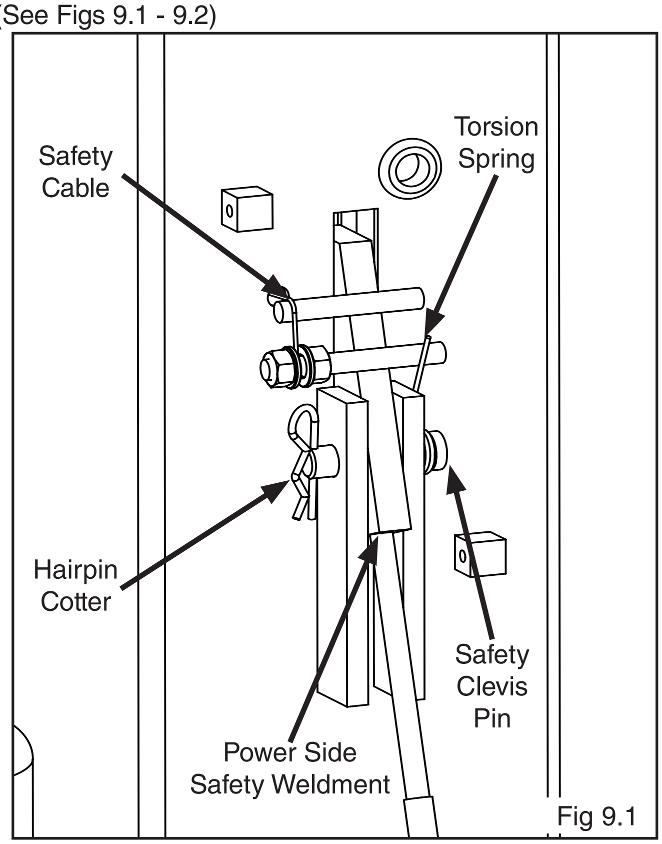


Fig 9.1

2. From the Off Side post insert the non-looped end of the safety cable through the hole located to the right of the Off Side safety weldment. (See Fig 9.3)

3. Route the cable under the sheave and route it towards the Overhead Assembly. (See Fig 9.4)

4. Route the cable through the Overhead Assembly's safety sheave(s) and across the lift. (See Figs 9.5 - 9.6)

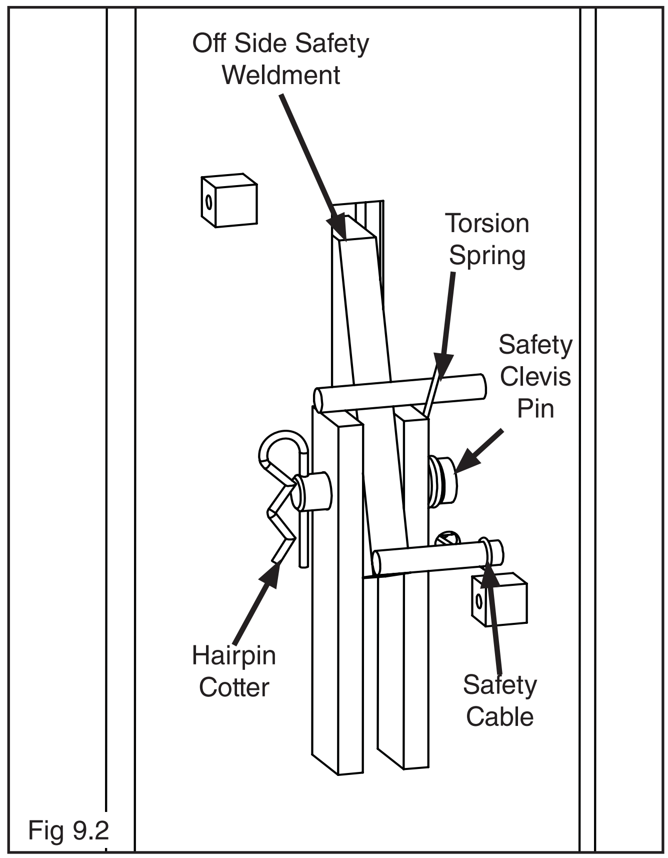


Fig 9.2

5. Route the cable the same way on the Power Side going back down the post.

6. Route the cable over the top pin on the safety handle. Insert the cable end through the hole on the threaded pin. (See Fig 9.7)

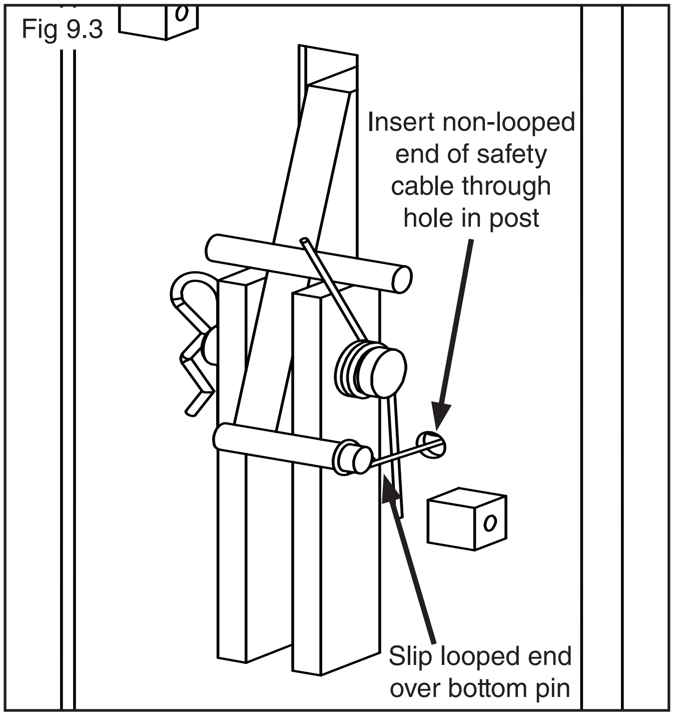
7. Pull the slack out the safety cable and keep tension on the cable as nuts are being tightened. Tighten jam nuts on either side of the cable keeping the cable centered to the hole to secure it into place. (See Fig 9.7)

⚠ DANGER

DANGER !

ENSURE THAT BOTH THE POWER SIDE & OFF SIDE SAFETIES ENGAGE PROPERLY PRIOR TO LIFT OPERATION.

Fig 9.3



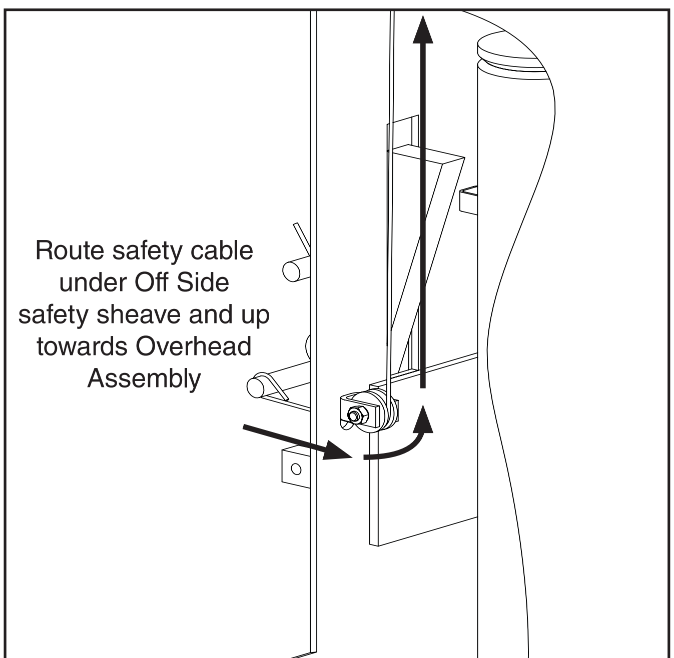


Fig 9.4

NOTE:

MAKE SURE TO KEEP THE SAFETY CABLE CENTERED WHEN TIGHTENING JAM NUTS ON SAFTEY.

XPR-10 Models

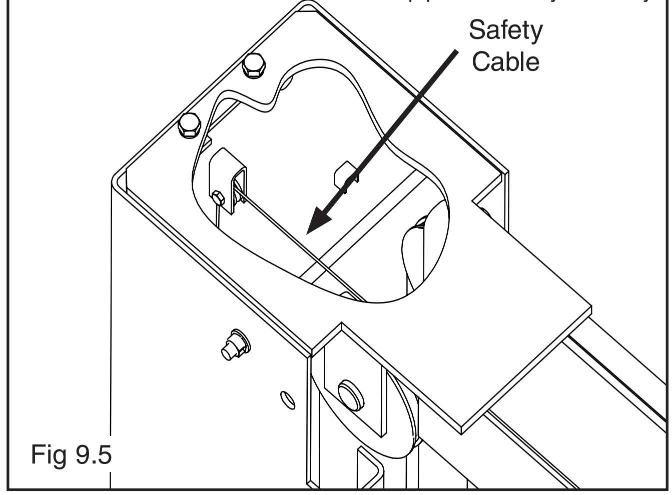


Fig 9.5

XPR-10A Models

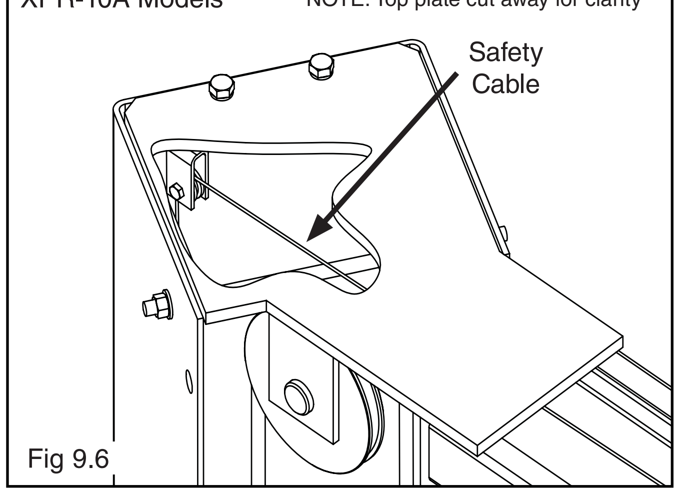


Fig 9.6

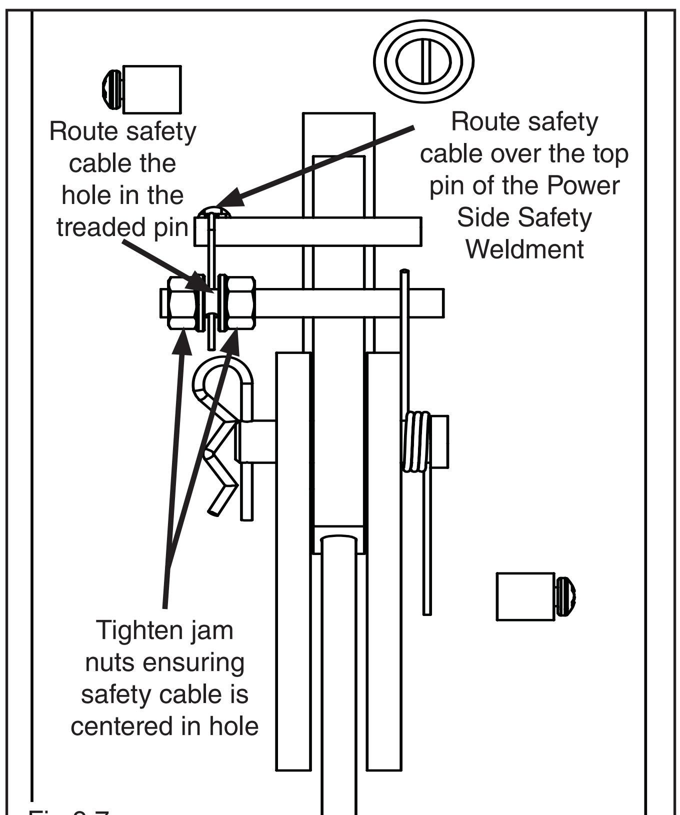


Fig 9.7

STEP 10
(Installing Hydraulic Lines)

NOTE:
FOR THE WIDE CONFIGURATION, A 13” EXTENSION MUST BE INSTALLED TO THE CROSSOVER HOSE. A JIC TO JIC STRAIGHT FITTING HAS BEEN PROVIDED TO CONNECT THE CROSSOVER HOSE TO THE EXTENSION HOSE IN THE PARTS BOX.

1. Install the bulkhead tee fitting into the Power Side post. The through hole is located approximately 90 inches from the floor on the back wall of the Power Side post.

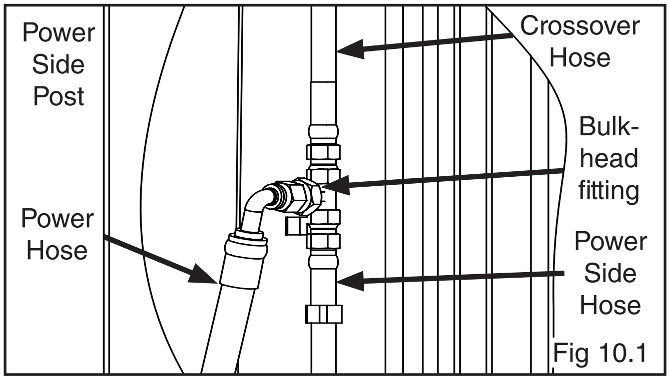


Fig 10.1

2. Connect the **Power Side** cylinder hose to the tee fitting. Be sure to route the hose through the retainer clips inside the posts.

3. Route the Off Side cylinder hose (Crossover Hose) up through the post and across the Overhead Assembly, down the post and connect it to the bulkhead tee fitting. (See Fig 10.1)

WARNING

WARNING!
WHEN ROUTING THE HYDRAULIC HOSE THROUGH THE POSTS, MAKE SURE TO ROUTE THROUGH THE HOSE CLIPS WELDED INSIDE EACH POST. MAKE SURE THAT THE HOSE IS CLEAR OF ANY MOVING PARTS. IT MAY BE NECESSARY TO TIE THE HOSE CLEAR BY USING NYLON TIE STRAPS OR WIRE.

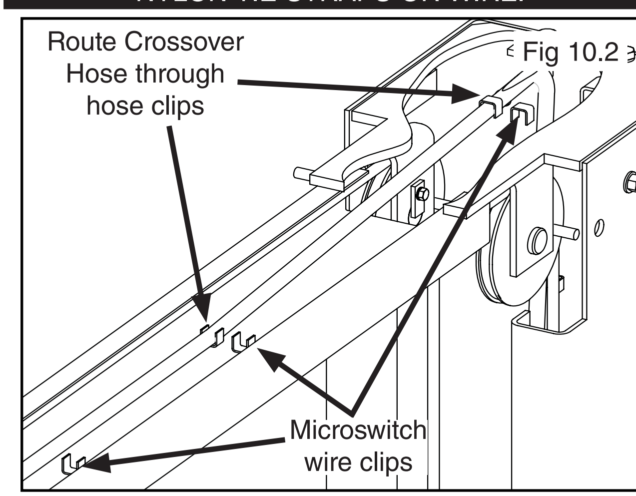


Fig 10.2

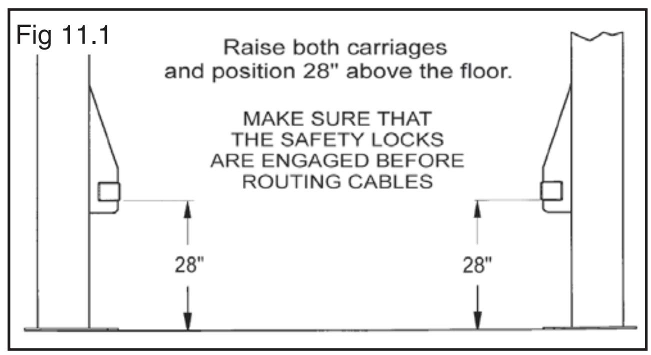
STEP 11
(Routing the Equalizer Cables)

WARNING

WARNING!
WHEN THE CABLE ADJUSTING NUTS BOTTOM OUT ON THE THREADED END OF THE CABLE CONNECTOR AND THERE IS STILL SLACK IN THE CABLES, THE CABLES HAVE STRETCHED BEYOND THE SAFE USEFUL LENGTH AND NEED TO BE REPLACED WITH FACTORY APPROVED CABLE ASSEMBLIES. DO NOT PLACE WASHERS, SPACERS OR OTHER DEVICES TO “SHORTEN” THE EFFECTIVE CABLE LENGTH AS DAMAGE TO THE LIFT OR INJURY TO PERSONS MAY OCCUR.

Refer to illustrations on Page 12.

1. Raise and lock each Carriage approximately 28” above the ground. (See Fig. 11.1)

Fig 11.1


DANGER

DANGER !
MAKE SURE THAT THE SAFETY LOCKS ON EACH POST ARE FULLY ENGAGED BEFORE ATTEMPTING TO ROUTE EQUALIZER CABLES AND/OR HOSES. CARRIAGES MUST BE EQUAL HEIGHT FROM THE FLOOR BEFORE PROCEEDING.

2. With the Carriages locked at 28” off the floor, route the Equalizer Cables up to the Top Trough.

3. Route the cables through the sheave brackets and reinstall the sheaves. (See Fig. 11.2)

Note: The sheaves should have been removed in Step 6.

4. Insert the threaded end of the cable through the hole on top of the carriage. Place M18 washer and M18 Nylock nut on threaded cable end. Tighten cable nuts until taut, checking that both cables have equal tension.
(See Fig 11.3)

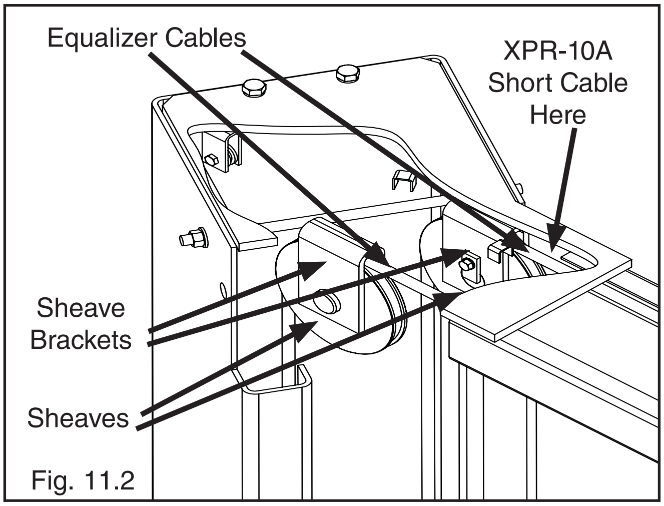


Fig. 11.2

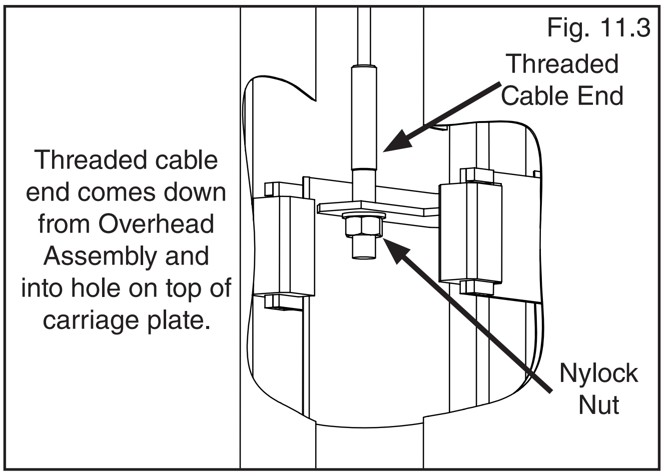


Fig. 11.3

DANGER

DANGER !
ALL WIRING MUST BE PERFORMED
BY A LICENSED ELECTRICIAN.

DANGER



DANGER!
DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITHOUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR AT POWER PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.

STEP 12
(Installing Overhead Microswitch)

CAUTION

CAUTION!
MICROSWITCH WIRE MUST BE RUN THROUGH CLIPS IN POST AND OVERHEAD ASSEMBLY. FAILURE TO DO SO CAN CAUSE DAMAGE TO LIFT OR TO VEHICLES.

1. Install the overhead Microswitch as shown below. Be sure to keep wire clear of moving parts. (See Fig.12.1)

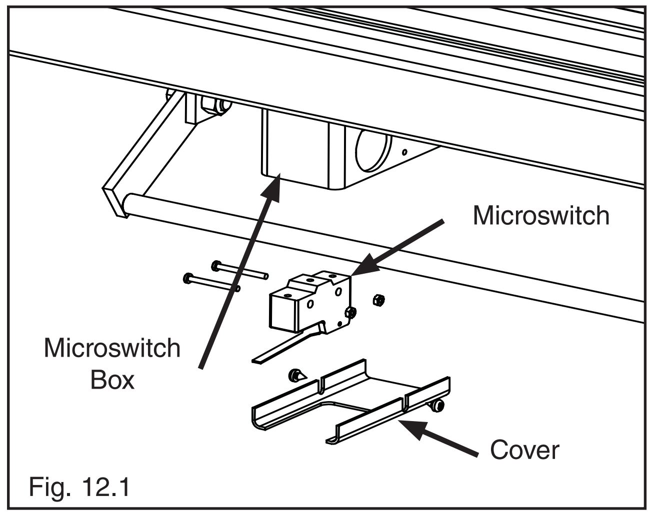


Fig. 12.1

2. Route Microswitch wire though the hole in Power Side post with rubber grommet. Loosely position Power Side safety cover and run other end of Microswitch wire through hole with grommet in Power Side safety cover. (See Fig. 12.2)

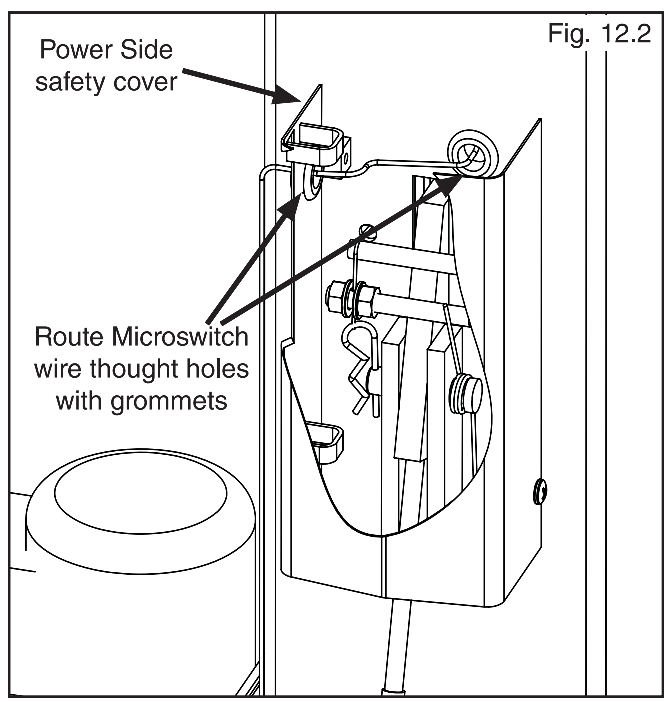


Fig. 12.2

3. Route wire up through post and across Overhead Assembly through hole in Overhead Assembly into the Microswitch box. (See Fig. 12.3)

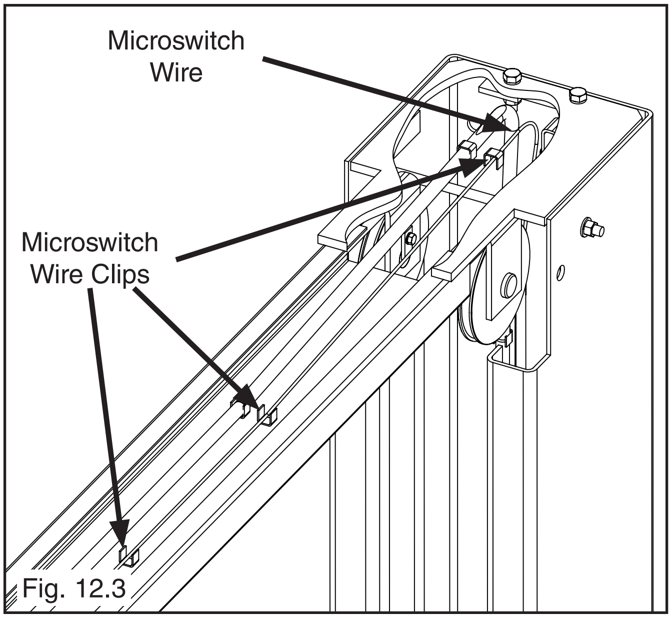


Fig. 12.3

STEP 13
(Installing power unit hose assembly and Power Side safety cover)

⚠ WARNING

WARNING!
POWER UNIT HYDRAULIC HOSE MUST BE ROUTED THROUGH THE HOSE CLIPS IN POWER SIDE SAFETY COVER. FAILURE TO DO SO CAN RESULT IN PERSONAL INJURY OR DAMAGE TO THE LIFT.

1. With Power Side safety cover loosely positioned route power unit hydraulic hose through clips in Power Side safety cover. (See Fig. 13.1)

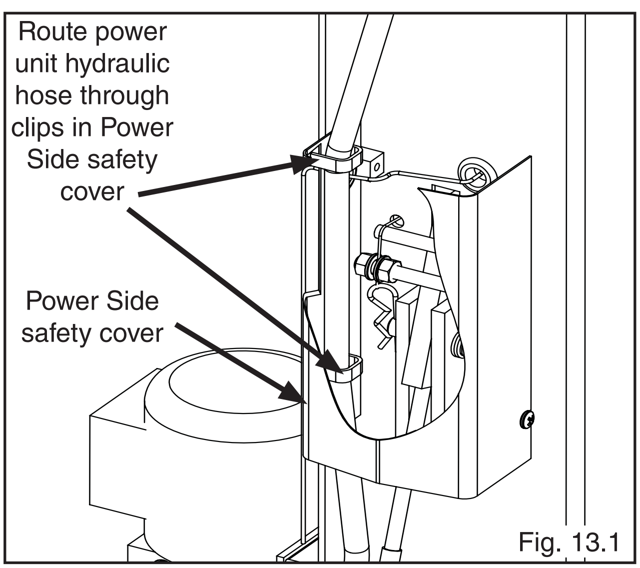


Fig. 13.1

2. Install the 90° fitting w/ O-ring into the power port of the power unit. Use teflon tape on the pipe fittings ONLY. Connect power unit hose assembly to the 90° w/O-ring fitting on power unit. (See Fig. 13.2)

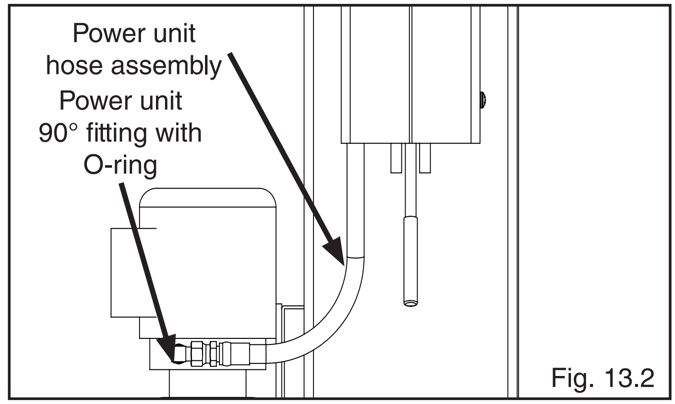


Fig. 13.2

3. Connect other end of power unit hydraulic hose assembly to the bulkhead fitting. (See Fig. 13.3)

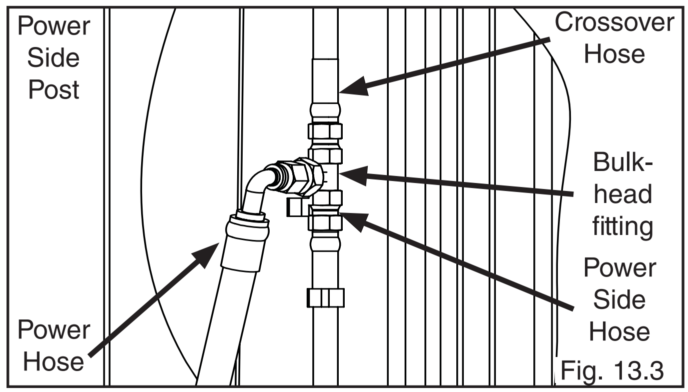


Fig. 13.3

4. After safeties have been adjusted and checked for proper operation, install and tighten Power Side safety cover and Off Side safety cover mounting bolts. (See Fig. 13.4 and 13.5)

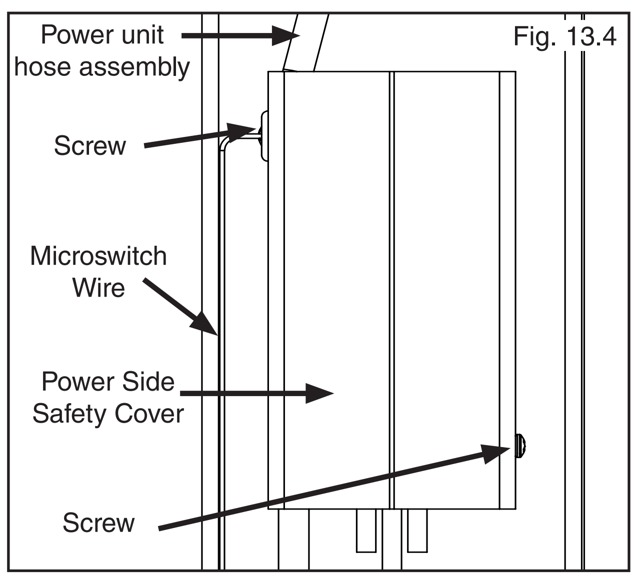


Fig. 13.4

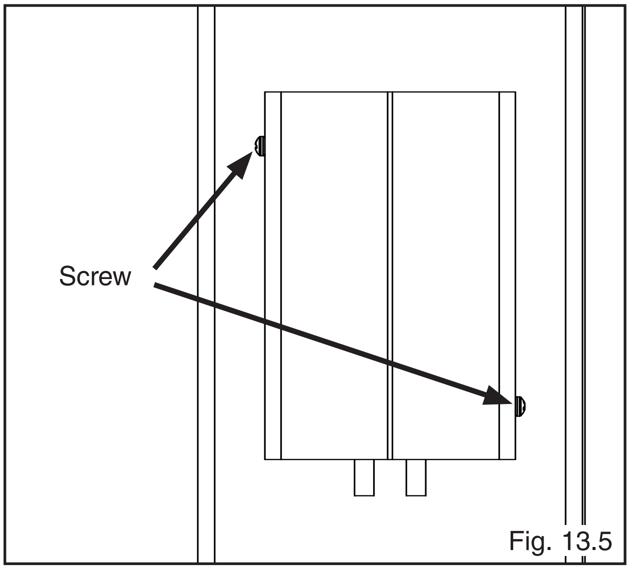


Fig. 13.5

STEP 14
(Installing the Lift Arms)

1. Place the appropriate lift arm assembly in the lift heads. (See Fig. 14.7 - 14.8)

2. Install the lift head pins into the lift head and through the holes in the arm assembly. (See Fig. 14.1)

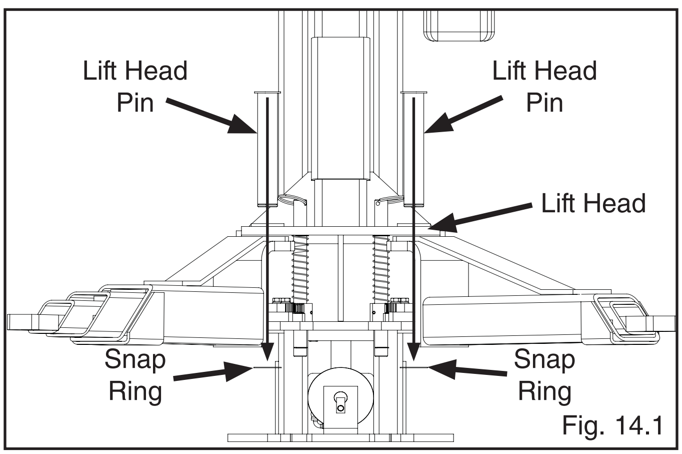


Fig. 14.1

3. Install the snap ring into the groove in the lift head pin on under side of the lift head. (See Fig. 14.2)

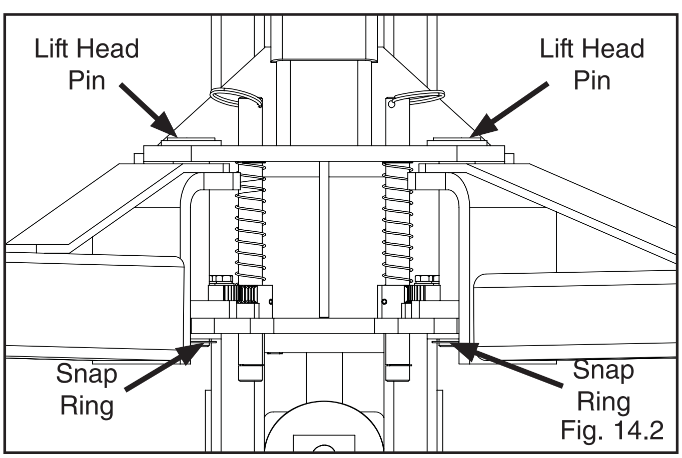


Fig. 14.2

⚠ DANGER

DANGER!
THE ARM RESTRAINT GEARS MUST BE POSITIONED AND ADJUSTED PROPERLY. CONFIRMATION OF PROPER GEAR ENGAGEMENT MUST BE MADE PRIOR TO THE OPERATION OF THE LIFT. PERIODIC INSPECTION AND ADJUSTMENT IS REQUIRED. FAILURE TO INSPECT AND ADJUST THE ARM RESTRAINT GEARS ON ALL FOUR ARMS PROPERLYCAN RESULT IN DAMAGE TO THE VEHICLE OR INJURY AND/OR DEATH.

4. Each arm restraint gear can be oriented in a Left or Right configuration on the arms. Each arm and arm restraint gear must be positioned in the proper location in the lift head. (See Fig. 14.3 - 14.4)

NOTE:
LEFT AND RIGHT ARE DETERMINED WHEN FACING THE INSIDE/OPEN SIDE OF THE LIFT POST.

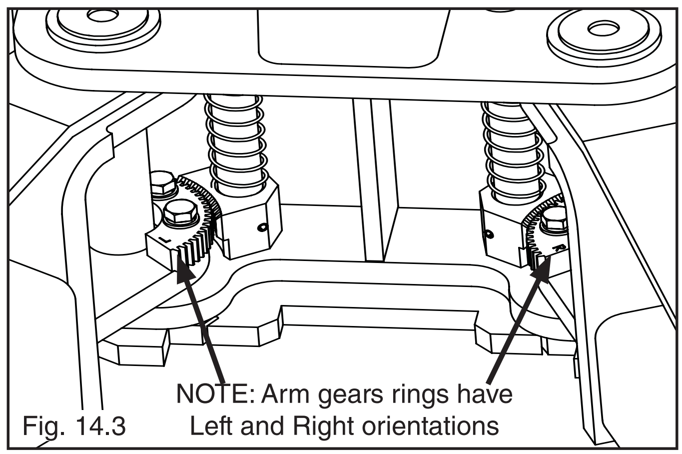
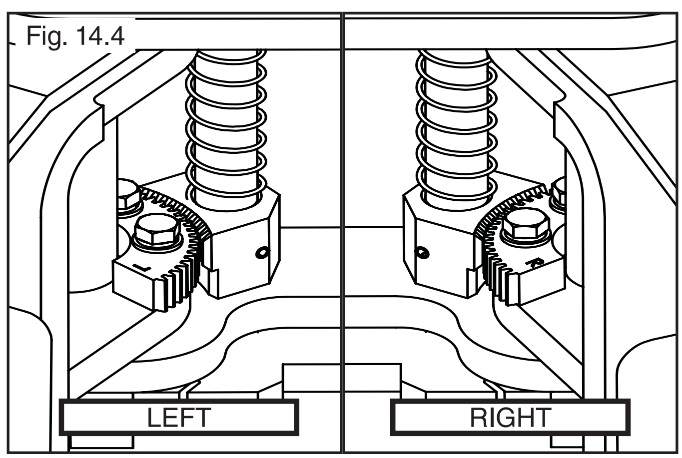


Fig. 14.3

Fig. 14.4


5. Loosen the arm restraint gear bolts and adjust the arm restraint gears so that the teeth on the gear ring mesh smoothly with the teeth on the gears of the arm restraint pin. (See Fig. 14.5)

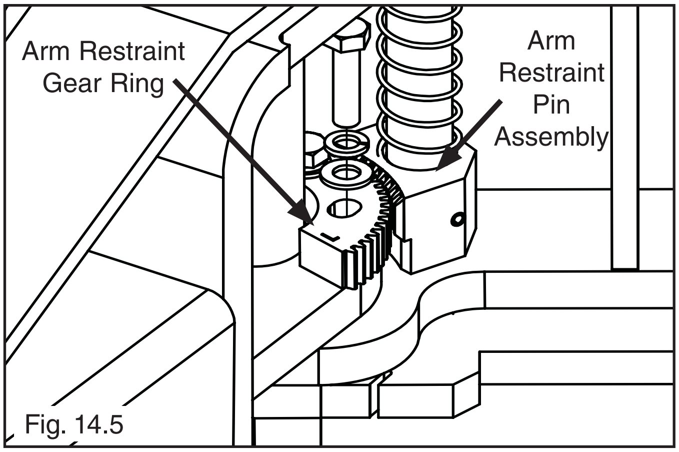
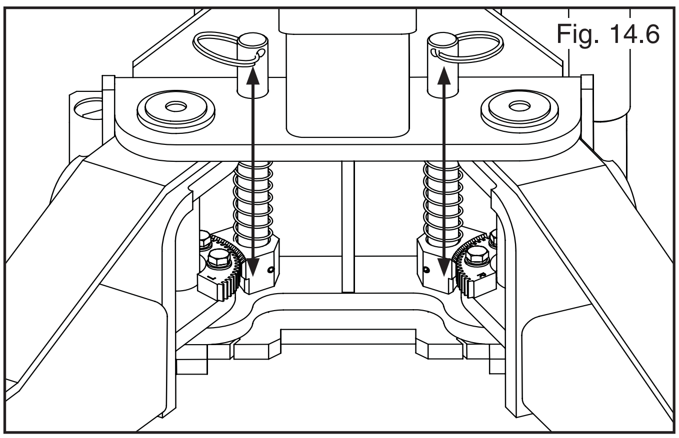


Fig. 14.5

6. Tighten the gear ring bolts.

7. Verify the operation of the arm restraints by pulling up on the key ring of the arm restraint pin. Pivot the arms back and forth and test the operation of the arm restraint pin in various positions. (See Fig. 14.6)


Fig. 14.6

8. Ensure that the arms do not move when a force of approximately 100 pounds or less is applied laterally to the fully extended arms.

9. Adjust the gear ring on the arm as necessary to ensure smooth operation and solid engagement of all four arm restraint pin assemblies with the arm restraint gear ring.

DANGER

NOTE:

EACH ARM RESTRAINT ASSEMBLY MUST BE INSPECTED AND ADJUSTED AS NEEDED BEFORE EACH AND EVERY TIME THE LIFT IS OPERATED.

DO NOT OPERATE THE LIFT IF ANY OF THE FOUR ARM RESTRAINT SYSTEMS ARE NOT FUNCTIONING PROPERLY.

REPLACE ANY BROKEN COMPONENTS OR COMPONENTS WITH BROKEN TEETH ONLY WITH AUTHORIZED OR APPROVED REPLACEMENT PARTS.

DANGER

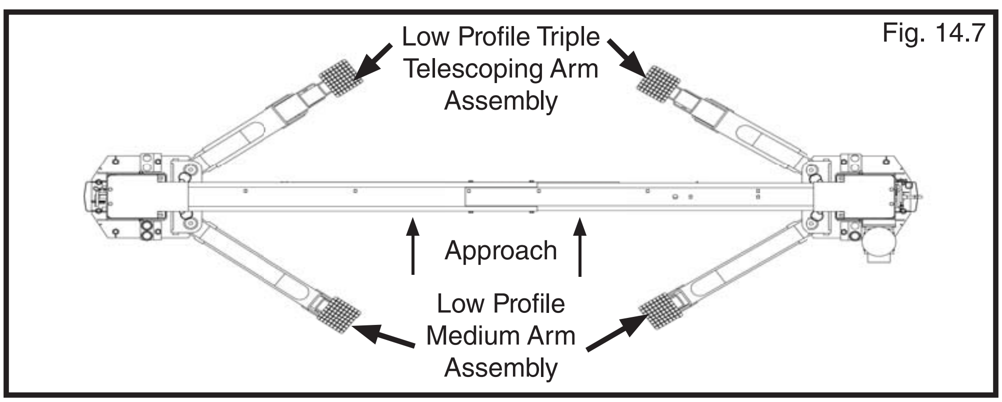


Fig. 14.7

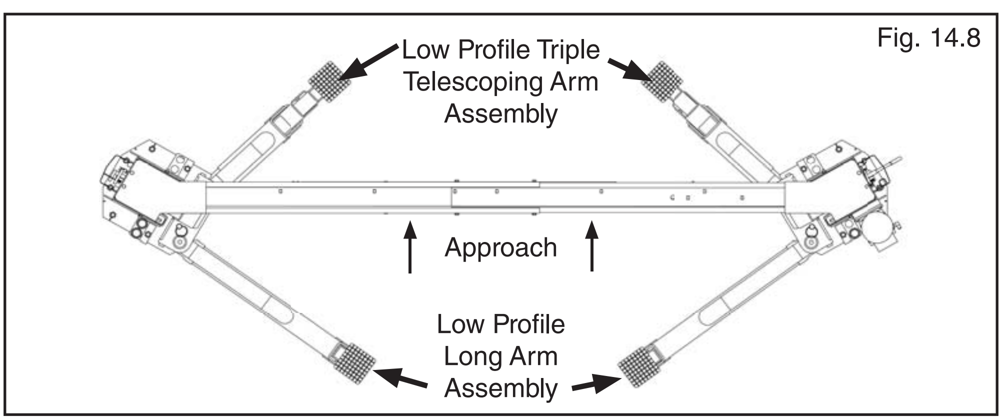


Fig. 14.8

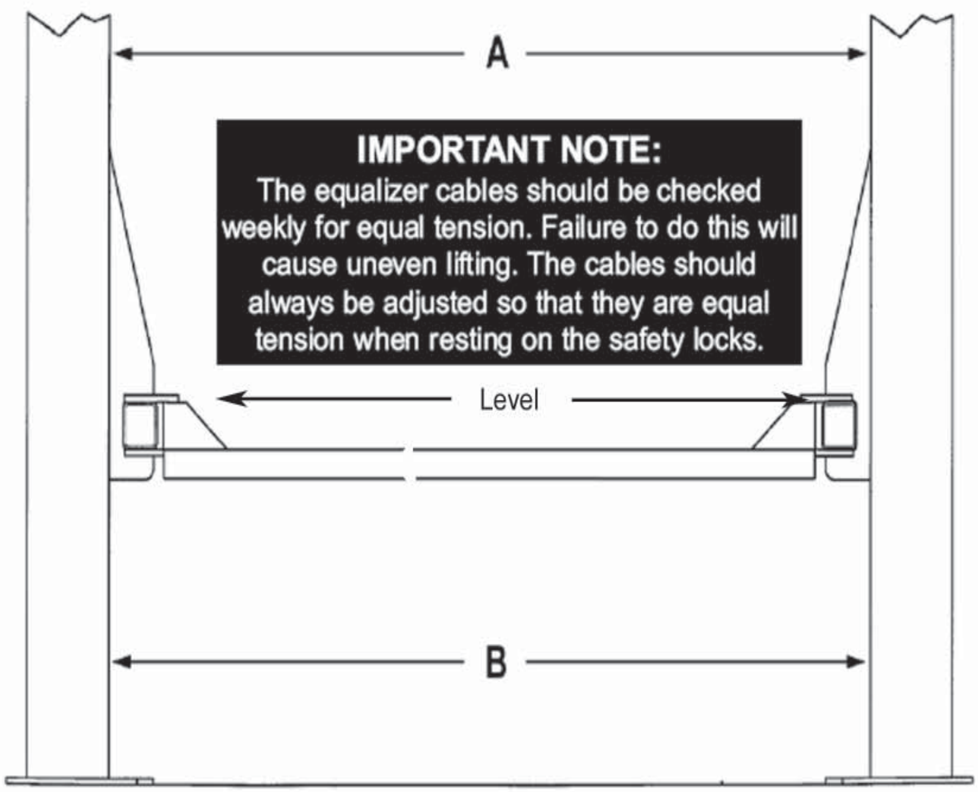
⚠ WARNING

IMPORTANT LEVELING INSTRUCTIONS

Before operating your lift, check to make sure that both "A" and "B" measurements are EQUAL.

The lift arms must be level before operation.

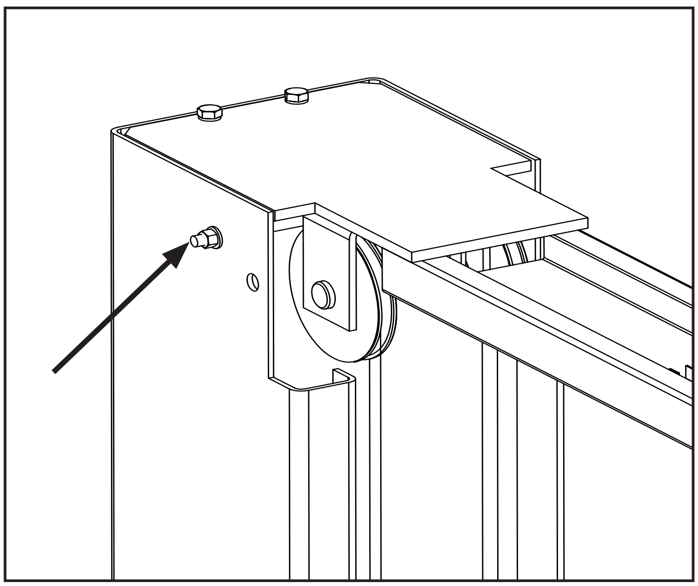
If your lift arms are not level, shim the columns as required.

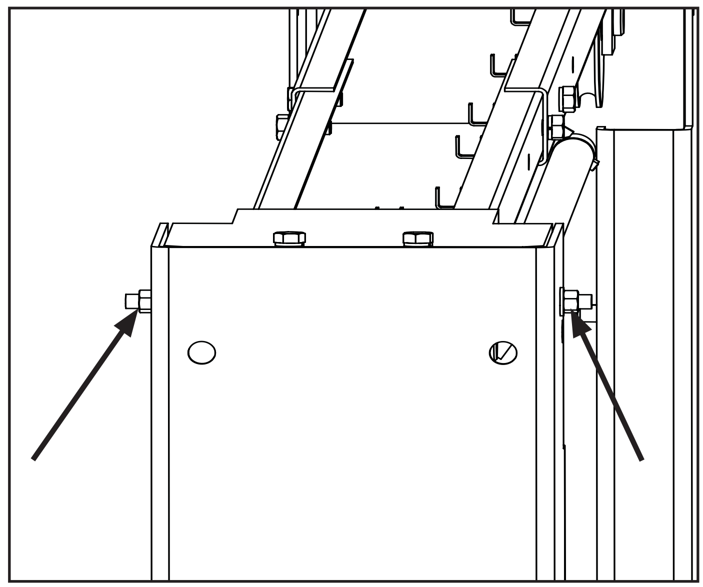


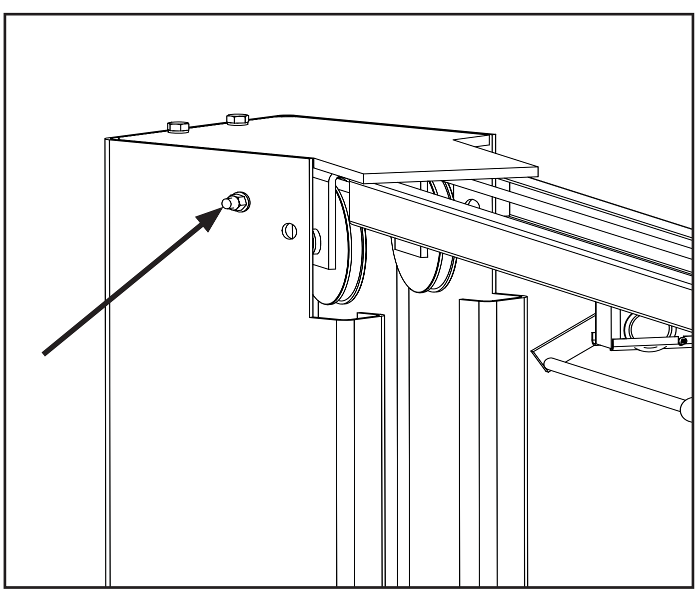
WARNING

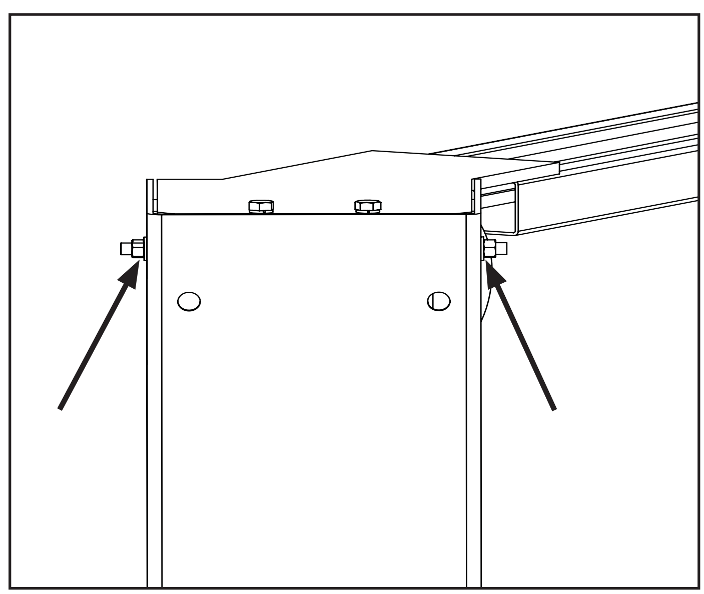
WARNING!

YOU MUST RE-INSTALL TOP CARRIAGE-STOP BOLT (SHOWN BELOW). TIGHTEN CARRIAGE-STOP BOLT TO 2-3 FT.-LBS. OF TORQUE UPON FINAL INSTALLATION INSPECTION. THESE INSTRUCTIONS MUST BE FOLLOWED TO ENSURE PROPER INSTALLATION AND OPERATION OF YOUR LIFT. FAILURE TO COMPLY WITH THESE INSTRUCTIONS CAN RESULT IN SERIOUS BODILY INJURY AND/OR DEATH AND/OR VOID PRODUCT WARRANTY. MANUFACTURER WILL ASSUME NO LIABILITY FOR LOSS OR DAMAGE OF ANY KIND, EXPRESSED OR IMPLIED RESULTING FROM IMPROPER INSTALLATION OR USE OF THIS PRODUCT.







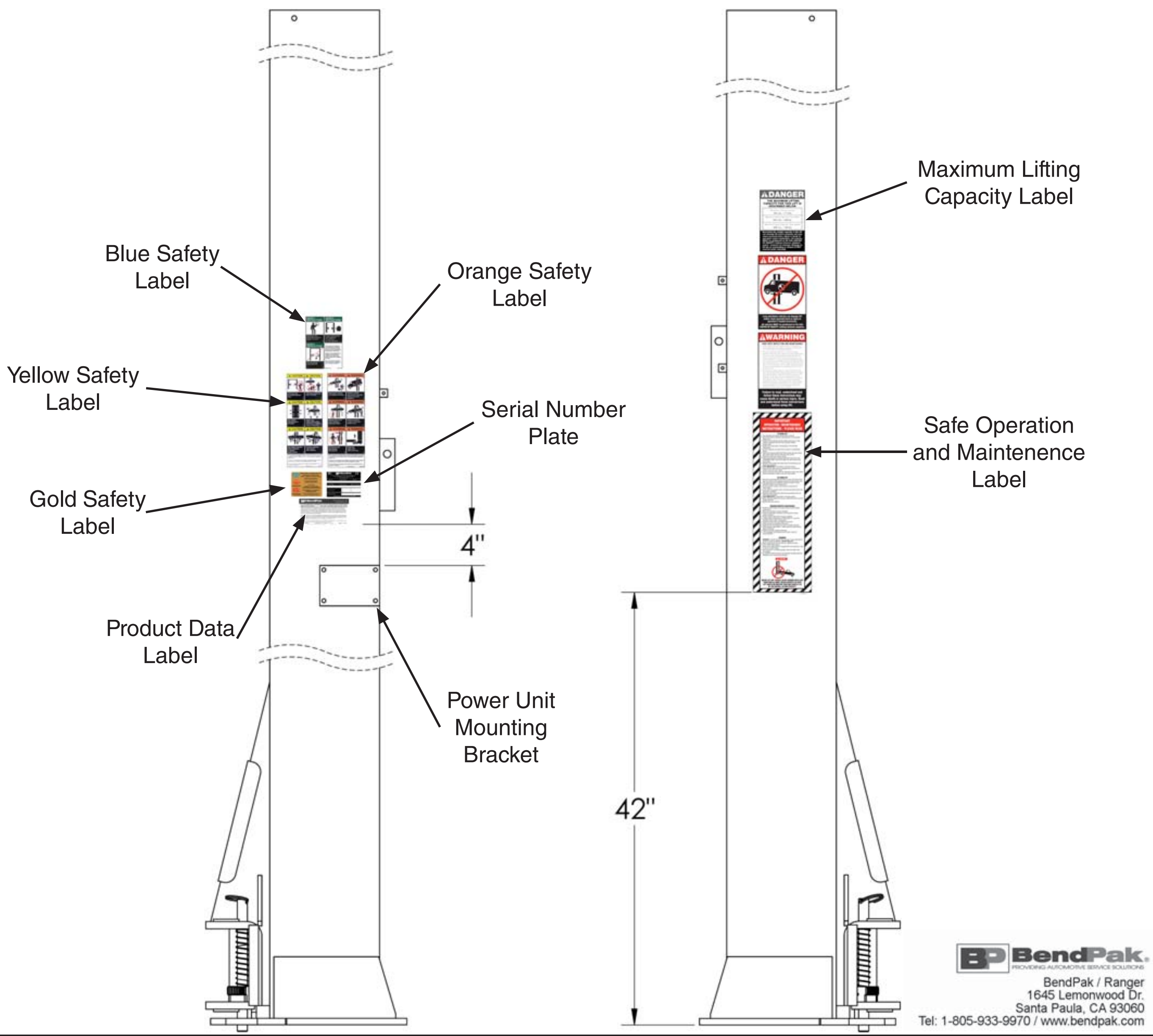


TWO-POST LIFT POWER SIDE POST SAFETY LABEL PLACEMENT GUIDELINES

⚠ WARNING

WARNING!

THESE ANSI/ALI ALCTV-2006 MANDATED SAFETY LABELS ARE PROVIDED FOR THIS PRODUCT FOR THE PROTECTION OF THE OPERATOR AND ANY PERSON(S) WORKING NEAR THE LIFT. THE SAFETY STICKERS MUST BE INSTALLED AS PER THE INSTRUCTIONS BELOW, PRIOR TO THE COMPLETION OF INSTALLATION. FAILURE TO PROPERLY INSTALL WARNING LABELS COULD FAIL TO WARN AND LEAD TO SERIOUS PERSONAL INJURY OR DEATH TO OPERATOR OR BYSTANDER OR DAMAGE TO PROPERTY. BE SURE EVERYONE WHO OPERATES THIS EQUIPMENT UNDERSTANDS ALL THE INFORMATION, CAUTION, WARNING, AND DANGER LABELS. KEEP ALL LABELS CLEAN SO THEY ARE LEGIBLE. THIS APPLIES TO ALL CAUTION, WARNING, AND DANGER LABELS. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE INFORMATION TO ALL OPERATORS FOR SAFE OPERATION OF THIS LIFT. REPLACE ANY DAMAGED OR WORN LABELS. ONCE ANY PART OF A LABEL BECOMES ILLEGIBLE, IT SHOULD BE REPLACED. THE PART NUMBERS FOR THE LABELS ARE LOCATED IN THE LOWER RIGHT CORNER OF THE LABEL. REPLACEMENT LABELS MAY BE ORDERED THROUGH YOUR DEALER OR THE ADDRESS BELOW. WHEN INSTALLING AND/OR REPLACING LABELS, BE SURE THE SURFACE IS CLEAN AND DRY, PEEL THE BACKING OFF THE LABEL, AND APPLY TO THE POST AS SHOWN BELOW. BE SURE TO WIPE WITH A CLEAN CLOTH TO RUB OUT ALL AIR BUBBLES.



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Santa Paula, CA 93060
Tel: 1-805-933-9970 / www.bendpak.com

DANGER

DANGER!

DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITH OUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.



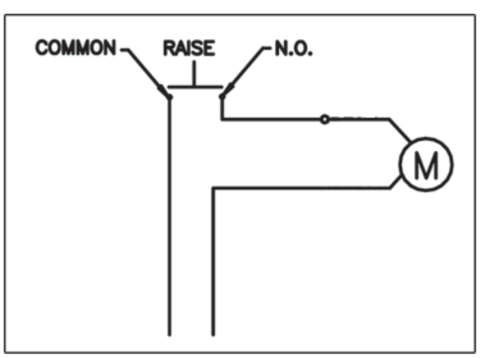
IMPORTANT POWER-UNIT INSTALLATION NOTES

- DO NOT run power unit without oil. Damage to pump can occur.
- The power unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid etc., is not covered under warranty.
- Improper electrical connection can damage motor and will not be covered under warranty.
- Motor can not run on 50HZ without a physical change in motor.
- Use a separate breaker for each power unit.
- Protect each circuit with time delay fuse or circuit breaker.
- For 208-230 volt, single phase, use a 25 amp fuse.
- For 208-230 volt, three phase, use a 20 amp fuse.
- For 380-440 volt, three phase, use a 15 amp fuse.

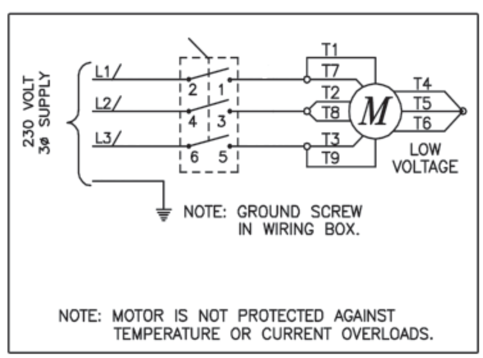
Installation and adjustment.
DO NOT attempt to raise vehicle until a thorough operation check has been completed.

All wiring must be performed by a certified electrician only.

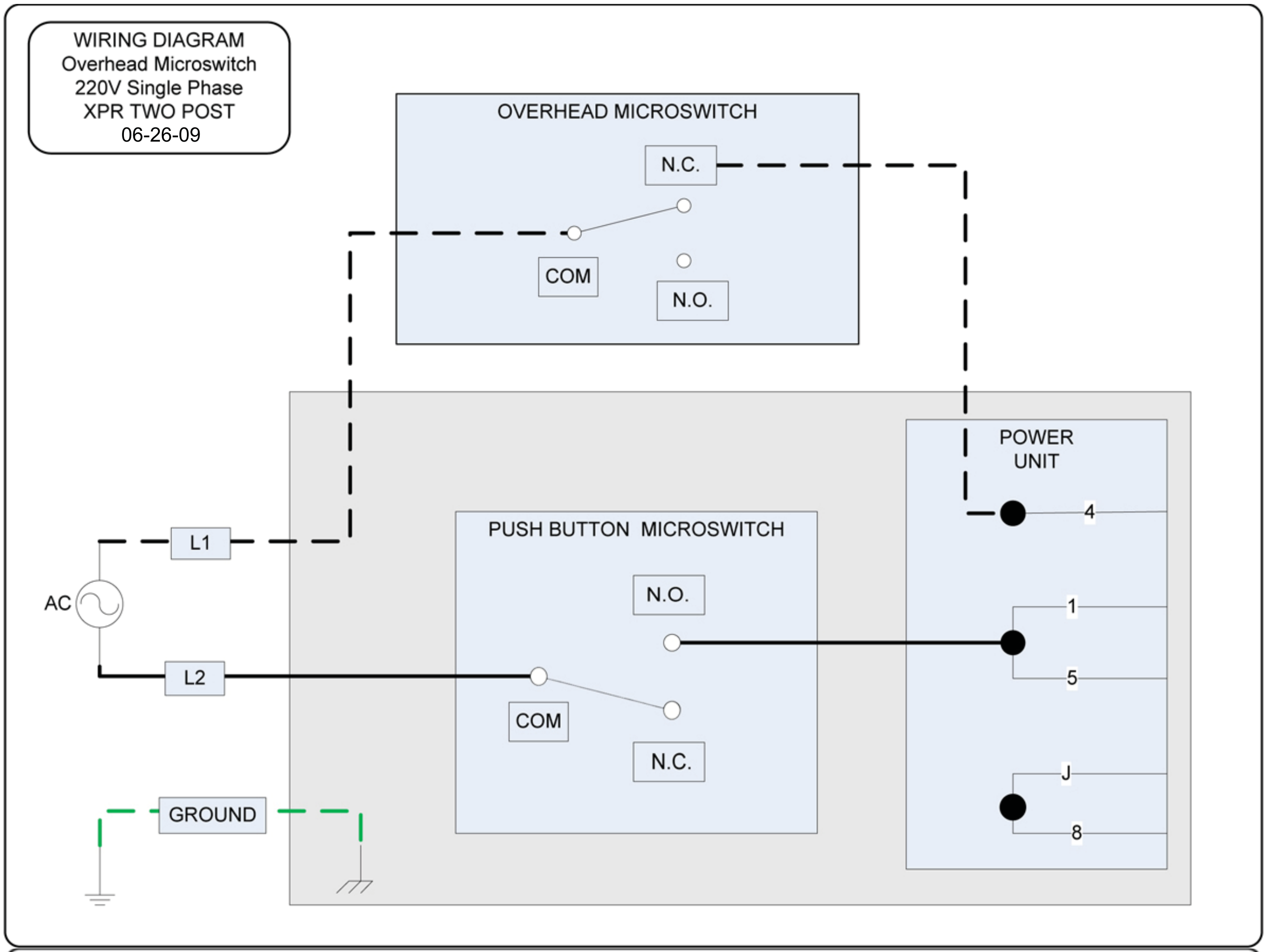
Single Phase

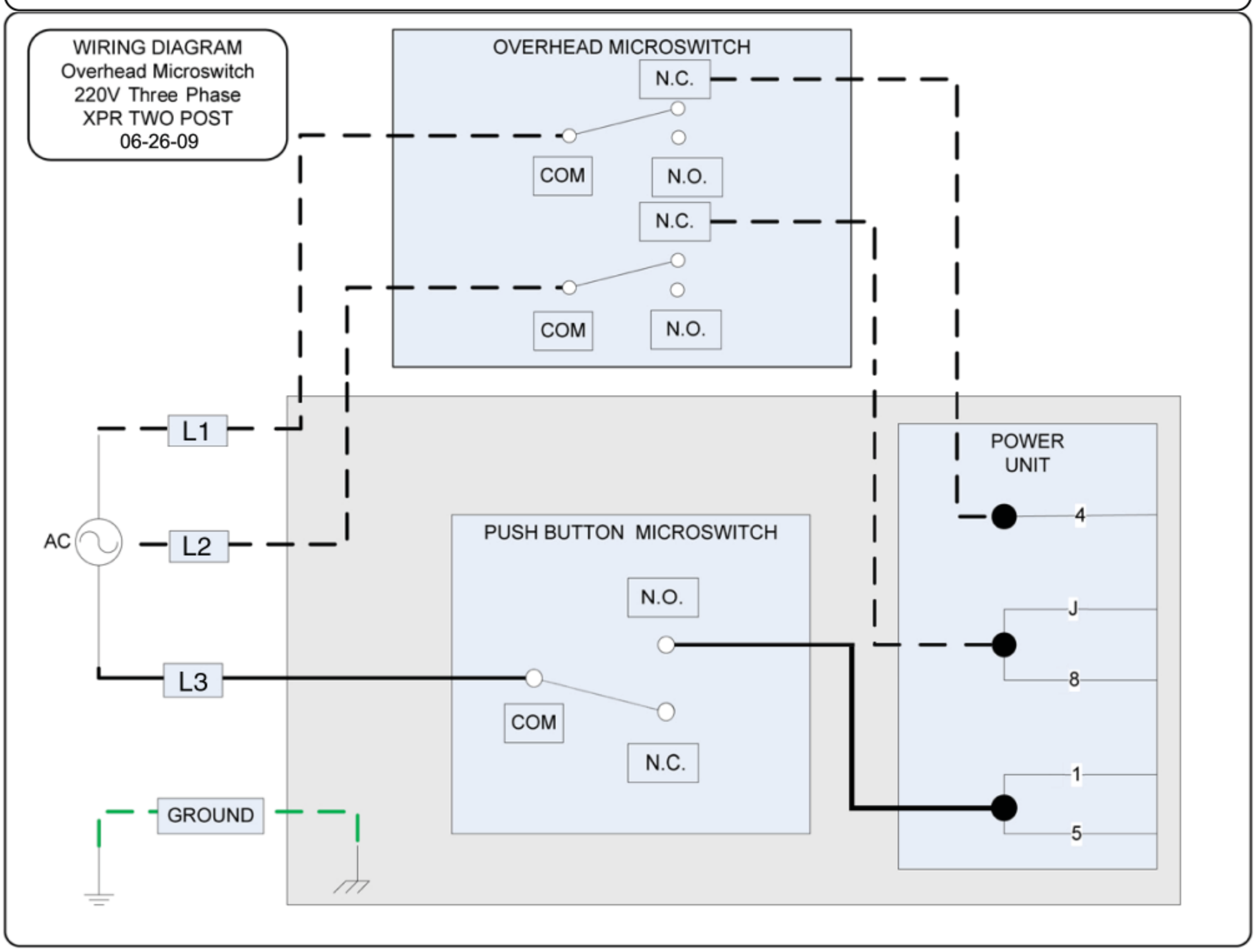


Three Phase



SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS.


WIRING DIAGRAM
Overhead Microswitch
220V Single Phase
XPR TWO POST
06-26-09
OVERHEAD MICROSWITCH
N.C.
COM
N.O.
POWER
UNIT
4
1
5
J
8
PUSH BUTTON MICROSWITCH
N.O.
COM
N.C.
L1
AC
L2
GROUND


WIRING DIAGRAM
Overhead Microswitch
220V Three Phase
XPR TWO POST
06-26-09
OVERHEAD MICROSWITCH
N.C.
COM
N.O.
N.C.
COM
N.O.
POWER
UNIT
4
J
8
1
5
PUSH BUTTON MICROSWITCH
N.O.
COM
N.C.
L1
AC
L2
L3
GROUND

STEP 15
(Power Unit Connection)

1. Have a certified electrician run the power supply to motor. Refer to the data plate found on the motor for proper power supply and wire size.

⚠ DANGER

RISK OF EXPLOSION!

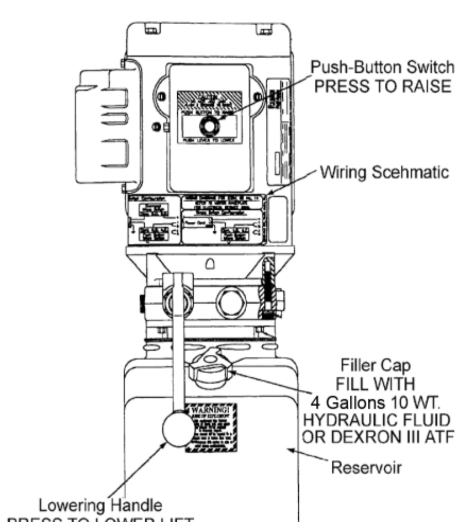
This equipment has internal arcing or parts that may spark and should not be exposed to flammable vapors. Motor should not be located in a recessed area or below floor level. NEVER expose motor to rain or other damp environments. DAMAGE TO MOTOR CAUSED BY WATER IS NOT COVERED UNDER WARRANTY.

NOTE:

CAUTION NEVER OPERATE THE MOTOR ON LINE VOLTAGE LESS THAN 208V. MOTOR DAMAGE MAY OCCUR WHICH IS NOT COVERED UNDER WARRANTY. HAVE A CERTIFIED ELECTRICIAN RUN APPROPRIATE POWER SUPPLY TO MOTOR. SIZE WIRE FOR 25 AMP CIRCUIT. SEE MOTOR OPERATING DATA TABLE. USE SEPARATE CIRCUIT FOR EACH POWER UNIT. PROTECT EACH CIRCUIT WITH TIME DELAY FUSE OR CIRCUITBREAKER. FOR SINGLE PHASE 208-230V, USE 25 AMP FUSE. THREE PHASE 208-240V, USE 25 AMP FUSE. FOR THREE PHASE 400V AND ABOVE, USE 15 AMP FUSE. ALL WIRING MUST COMPLY WITH NECK AND ALL LOCAL ELECTRICAL CODES.

POWER UNIT

Fig 15.1



STEP 16
(Lift Start Up / Final Adjustments)

⚠ CAUTION

CAUTION!

DURING THE START-UP PROCEDURE, OBSERVE ALL OPERATING COMPONENTS AND CHECK FOR PROPER INSTALLATION AND ADJUSTMENT. DO NOT ATTEMPT TO RAISE VEHICLE UNTIL A THOROUGH OPERATIONAL CHECK HAS BEEN COMPLETED.

1. Make sure the power unit reservoir is full with four (4) gallons of 10-WT hydraulic oil or Dexron-III automatic transmission fluid.

2. Apply light axle grease to the inside of the posts where the slide blocks glide.

3. Test the power unit by pressing the push-button switch. If the motor sounds like it is operating properly, raise the lift and check all hose connections for leaks. If the motor gets hot or sounds peculiar, stop and check all electrical connections.

4. Before proceeding, double-check to make sure all cables are properly positioned within the grooves of ALL sheaves. Make sure all cable sheave retaining pins and/or clips are secure.

5. Check to make sure that all safety locks are cleared and free.

6. Continue to press the button to raise lift until the cables get taut and the lift starts to move.

7. **KEEP HANDS AND FEET CLEAR**. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

8. Check all MAIN SAFETY LOCKS to make sure they move freely and spring back to the lock position when released. Lubricate all SAFETY PIVOT points with light spray-oil.

9. Cycle the lift up and down a few times to ensure that the safety locks are engaging uniformly and that the safety release mechanisms are functioning. Re-adjust if necessary.

POST-INSTALLATION CHECK-OFF

- Posts properly shimmed and stable
- Anchor bolts tightened
- Pivot / sheave pins properly attached
- Carriage stop bolts torqued to 2-3 ft-lb
- Electric power supply confirmed
- Cables adjusted properly
- Safety locks functioning properly
- Check for hydraulic leaks
- Oil level
- Lubrication of critical components
- Check for overhead obstructions
- Lift arms level
- All screws, bolts, and pins secured
- Surrounding area clean
- Operation, maintenance and safety manuals on site.

STEP 17
(Lubrication)

1. After installation and start-up has been completed, lubricate lift components as described below. (See Fig. 17.1)

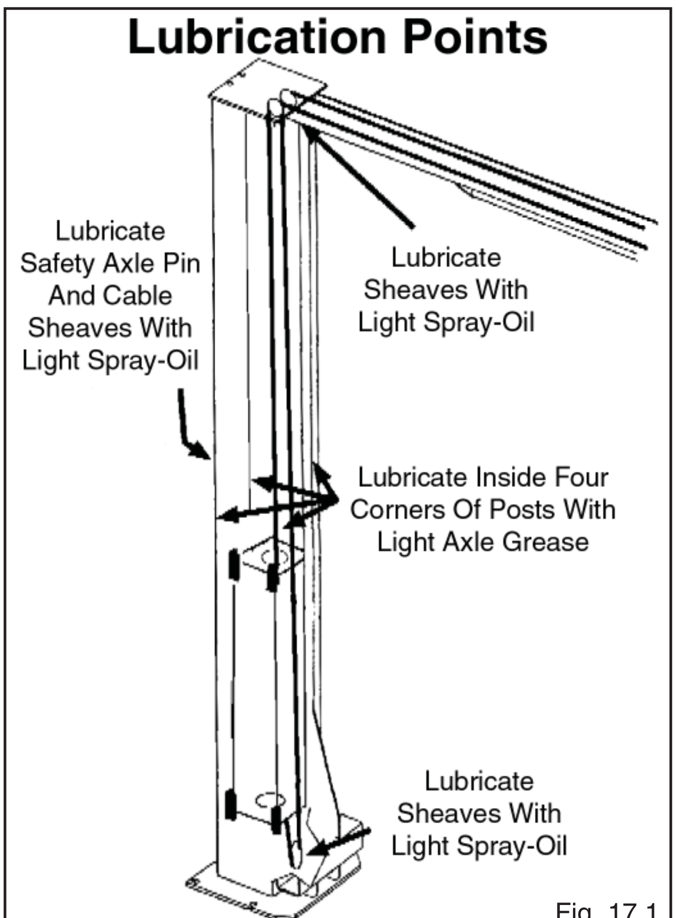


Fig. 17.1

NOTE:
THERE WILL BE INITIAL STRETCHING OF THE CABLES AND/OR WITH INCREASED LOADS. ADJUST THE CABLES AS OUTLINED ABOVE A WEEK AFTER FIRST USE, THEN EVERY THREE TO SIX MONTHS THEREAFTER DEPENDING ON USAGE AND/OR TO COMPENSATE FOR STRETCH.

STEP 18
(Bleeding the Cylinders)



DANGER!
THE LIFT WILL MOVE DOWN WHEN BLEEDING MAKE SURE ALL EQUIPMENT, PERSONNEL ,HANDS AND FEET ARE CLEAR BEFORE BLEEDING

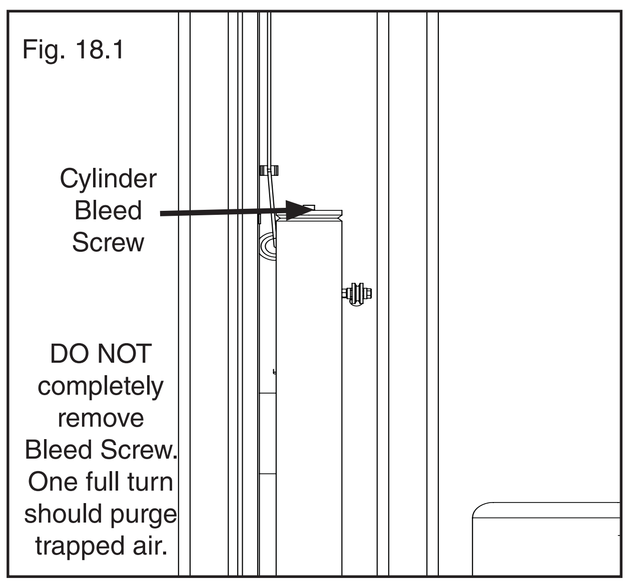
1. After electrical power is connected and oil reservoir is full, press button to raise lift.

2. Continue raising until lift cylinders fully extend to full height. DO NOT continue pressing button after lift reaches full height. Damage to motor can occur if continued.

3. Lower the lift only HALF WAY by pressing the SAFETY RELEASE handle inward then pressing in the DOWN lever on the power unit.

4. With the lift at half height, slowly loosen the BLEED SCREWS located at the top of each cylinder to bleed trapped air. DO NOT completely remove bleed screws. Re-tighten after trapped air has escaped. (See Fig. 18.1)

Fig. 18.1



5. Lower the lift completely by pressing the SAFETY RELEASE handle inward then pressing the DOWN lever on power unit. Wait five minutes and repeat bleeding process one additional time.

Utility Air-Electric Workstation

Utility Station may be mounted on the vertical column of the lift or on a wall.
IMPORTANT: Check State or Local codes for any height requirements for the electrical outlets before mounting.

To mount the Utility Station on a Lift Column, use the Box as a template, mark and drill 11/32" diameter holes. Use 5/16" diameter bolts and lock nuts to secure to the side of the lift.

IMPORTANT: The hole locations are critical to avoid interference with the carriage slide blocks.

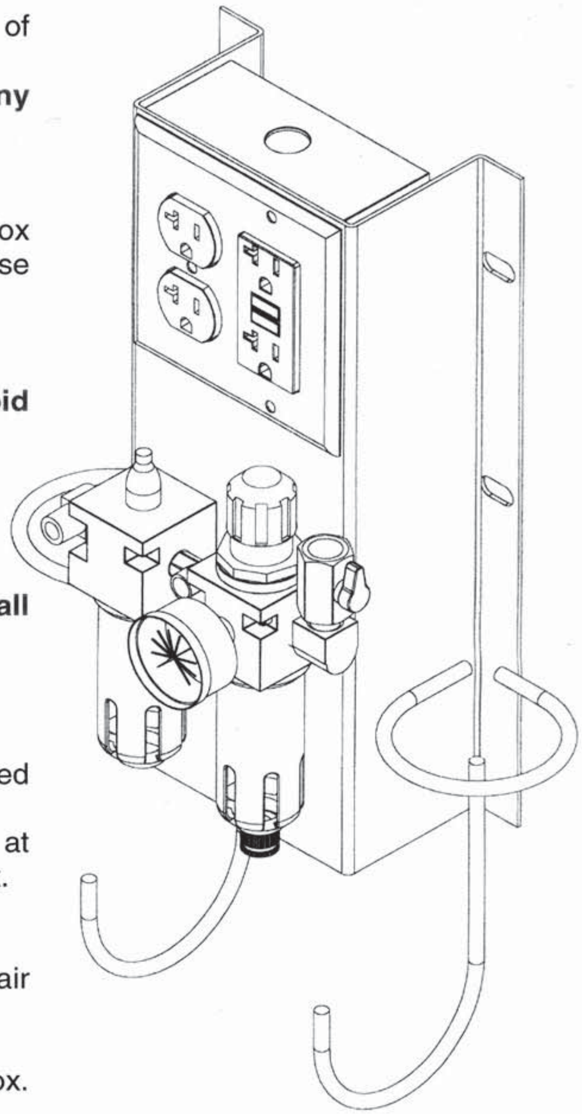
For Wall mounting, mount in the same fashion use appropriate hardware for either sheet rock or concrete.

IMPORTANT: All electrical wiring shall comply with all State and Local Codes.

Connect electrical wiring to single phase, 60Hz 115 volt electrical supply using suitable conduit (not supplied). The duplex receptacle must be connected through the GFCI with the input line to the box connected to a circuit breaker or time delay fuse rated at 20 amps. Both receptacles must be grounded to the box.

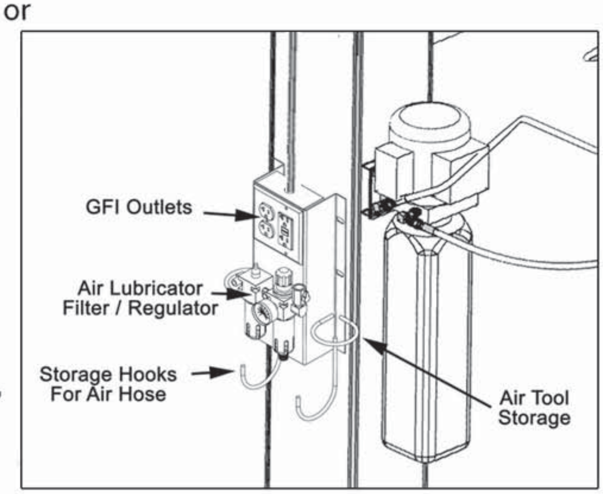
Connect main air supply to 1/4" ball valve inlet on the Utility Station (Run **3/8"** line from compressor or main air system to Utility Station.)

Install Quick Couplers to the 1/4" male fittings on the box. The air supply between the filter and the lubricator will be non-lubricated, used for tire inflation or blowing off. The air outlet on the left side will be lubricated for air tool use.



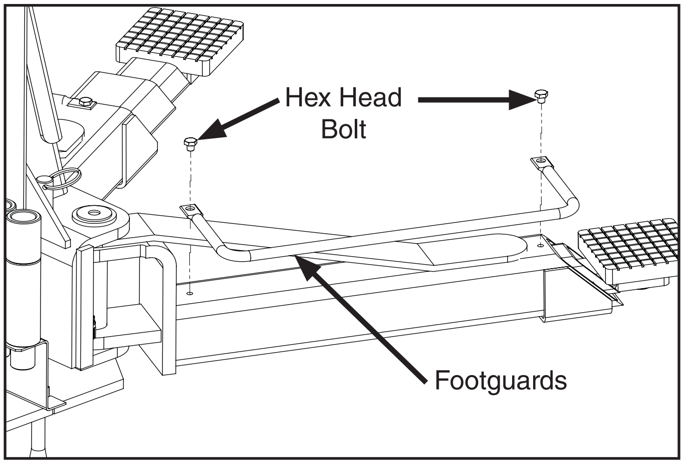
Regulator Instructions

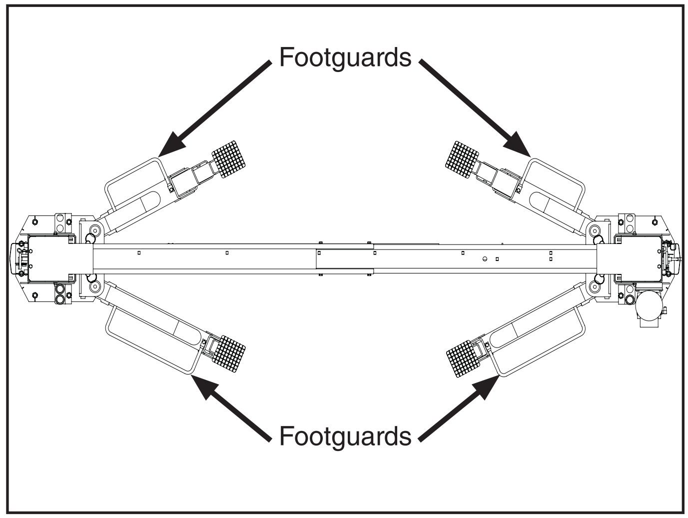
- Regulate pressure by raising the knob, then turning clockwise to increase and counterclockwise to decrease. Push knob down to lock setting.
- Adjust the oil mist using the screwdriver slot located on top of the lubricator.
- To fill the lubricator, first depressurize the air system, remove the slotted screw plug in the body. Replace the screw before repressurizing.



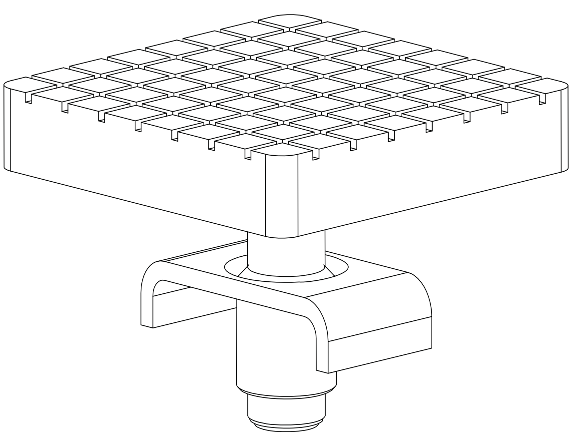
OPTIONAL FOOT GUARD INSTALLATION

1. Install the Foot Guards to the outside of the 4 Lift Arm Assemblies. Tighten the Hex Head Bolts. (See Fig 1-2)

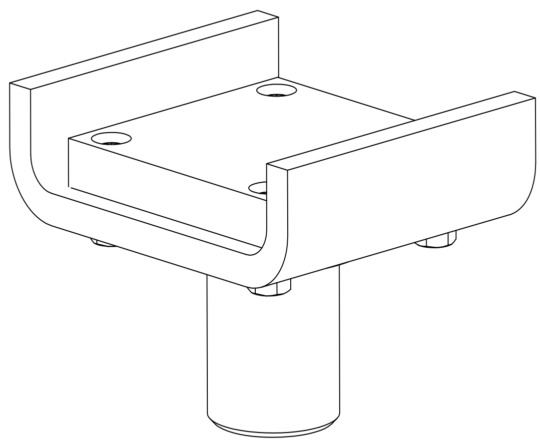




OPTIONAL CRADLE AND SCREW PAD ADAPTERS



SCREW PAD ADAPTER



FRAME CRADLE PAD ADAPTER

Optional Equipment available through your Authorized BendPak Dealer.

STEP 19
(Operation Instructions)

OWNER/EMPLOYER RESPONSIBILITIES

The Owner/Employer:

• Shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM01-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

• Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer shall ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

• Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

• Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

• Shall display the lift manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting It Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI AL-OIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator.

• Shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1-1982 (R1993), Safety Requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs.

• Shall not modify the lift in any manner without the prior written consent of the manufacturer.



LIFT OPERATION SAFETY

• **DAILY** inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use only qualified lift service personnel and genuine BendPak parts to make repairs.

• **THOROUGHLY** train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.

• **NEVER** allow unauthorized or untrained persons to position vehicle or operate lift.

• **PROHIBIT** unauthorized persons from being in shop area while lift is in use.

• **DO NOT** permit anyone on lift or inside vehicle when it is either being raised or lowered.

• **ALWAYS** keep area around lift free of tools, debris, grease and oil.

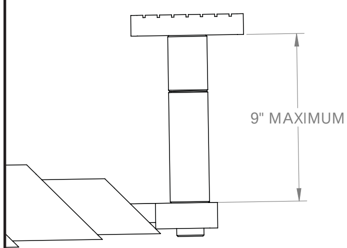
• **NEVER** overload lift. Capacity of lift is shown on nameplate affixed to the lift.

• **DO NOT** stand in front of the vehicle while it is being positioned in lift bay.

• **DO NOT** hit or run over lift arms or adapters. This could damage lift or vehicle. Before driving vehicle into lift bay, position arms and adapters to provide unobstructed entrance onto lift.

• **ALWAYS** load vehicle on lift carefully. Position the lift adapters to contact at the vehicle manufacturer's recommended lift points. Raise lift until adapters contact vehicle. Check adapters for secure contact with vehicle. Raise lift to desired working height. (See Fig.19.1)

⚠ DANGER



Never exceed 9" of lift adapter height by any combination of adapters. Failure to comply can result in serious damage, personal injury, or death.

Fig. 19.1

• **DO NOT** block open or override self-closing lift controls; they are designed to return to the "Off" or Neutral position when released.

• **DO NOT** remove or disable arm restraints.

• **ALWAYS** remain clear of lift when raising or lowering vehicles.

• **ALWAYS** use safety stands when removing or installing heavy components.

• **DO NOT** go under raised vehicle if safety locks are not engaged.

⚠ DANGER

DANGER!
VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA. SUSPENSION COMPONENTS USED ON THIS LIFT ARE INTENDED TO RAISE AND LOWER LIFT ONLY AND ARE NOT MEANT TO BE LOAD HOLDING DEVICES. REMAIN CLEAR OF ELEVATED LIFT UNLESS VISUAL CONFIRMATION IS MADE THAT ALL PRIMARY SAFETY LOCKS ARE FULLY ENGAGED AND THE LIFT IS LOWERED ONTO THE SAFETY LOCKS, REFER TO INSTALLATION/ OPERATION MANUAL FOR PROPER SAFETY LOCK PROCEDURES AND/OR FURTHER INSTRUCTION.

• **NEVER LEAVE LIFT IN ELEVATED CONDITION** unless all Safety Locks are engaged.

• **AVOID** excessive rocking of vehicle while on lift.

• **ALWAYS CLEAR AREA** if vehicle is in danger of falling.

⚠ WARNING

WARNING!
WHEN LOWERING THE LIFT PAY CAREFUL ATTENTION THAT ALL PERSONNEL AND OBJECTS ARE KEPT CLEAR. ALWAYS KEEP A VISUAL LINE OF SITE ON THE LIFT AT ALL TIMES. ALWAYS MAKE SURE THAT ALL LOCKS ARE DISENGAGED. IF ONE OF THE LOCKS INADVERTENTLY LOCKS UPON DESCENT THE VEHICLE MAY DISMOUNT CAUSING PERSONAL INJURY OR DEATH.

• **ALWAYS REMOVE** tool trays, stands, etc. before lowering lift.

• **ALWAYS RELEASE** safety locks before attempting to lower lift.

• **ALWAYS POSITION** the lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.

TO RAISE THE LIFT

⚠ WARNING

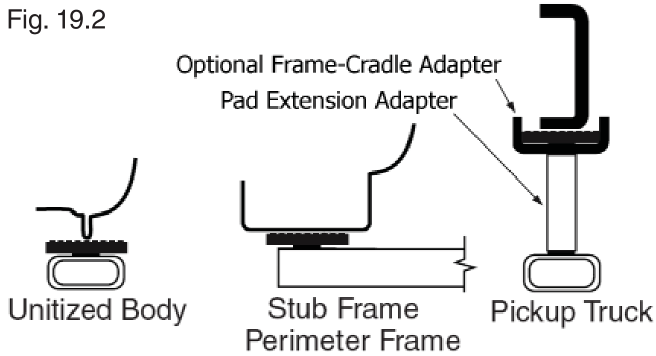
WARNING!
TO AVOID PERSONAL INJURY AND/OR PROPERTY DAMAGE, PERMIT ONLY TRAINED PERSONNEL TO OPERATE LIFT. AFTER REVIEWING THESE INSTRUCTIONS, PRACTICE USING LIFT CONTROLS BY RUNNING THE LIFT THROUGH A FEW UNLOADED CYCLES BEFORE LOADING VEHICLE ON LIFT. ALWAYS LIFT THE VEHICLE USING ALL FOUR ADAPTERS. **NEVER** RAISE JUST ONE END, ONE CORNER, OR ONE SIDE OF VEHICLE.

1. Before Loading: Lift must be fully lowered and service bay clear of all personnel before the vehicle is brought on lift with the swing arms set to the full drive-thru position.

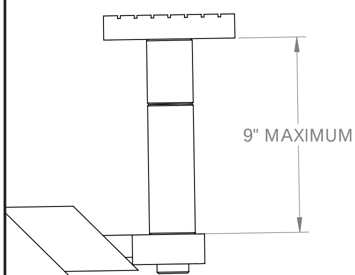
2. Loading: Swing arms under vehicle and position adapters at vehicle manufacturer's recommended lift points. Use height extenders or optional frame-cradle adapters when necessary to ensure good contact. (See Fig 19.2 - 19.3)

3. Some vehicles may have the manufacturer's Service Garage Lift Point locations identified by triangle shape marks on the undercarriage (reference ANSI/SAE J2184-1992). Also, there may be a label located on the right front door jamb area showing specific vehicle lift points.

Fig. 19.2



⚠ DANGER



Never exceed 9" of lift adapter height by any combination of adapters. Failure to comply can result in serious damage, personal injury, or death.

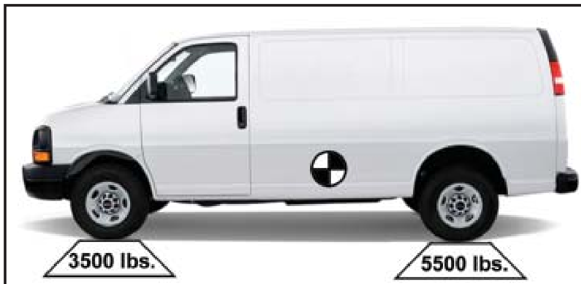
Fig. 19.3

⚠ WARNING

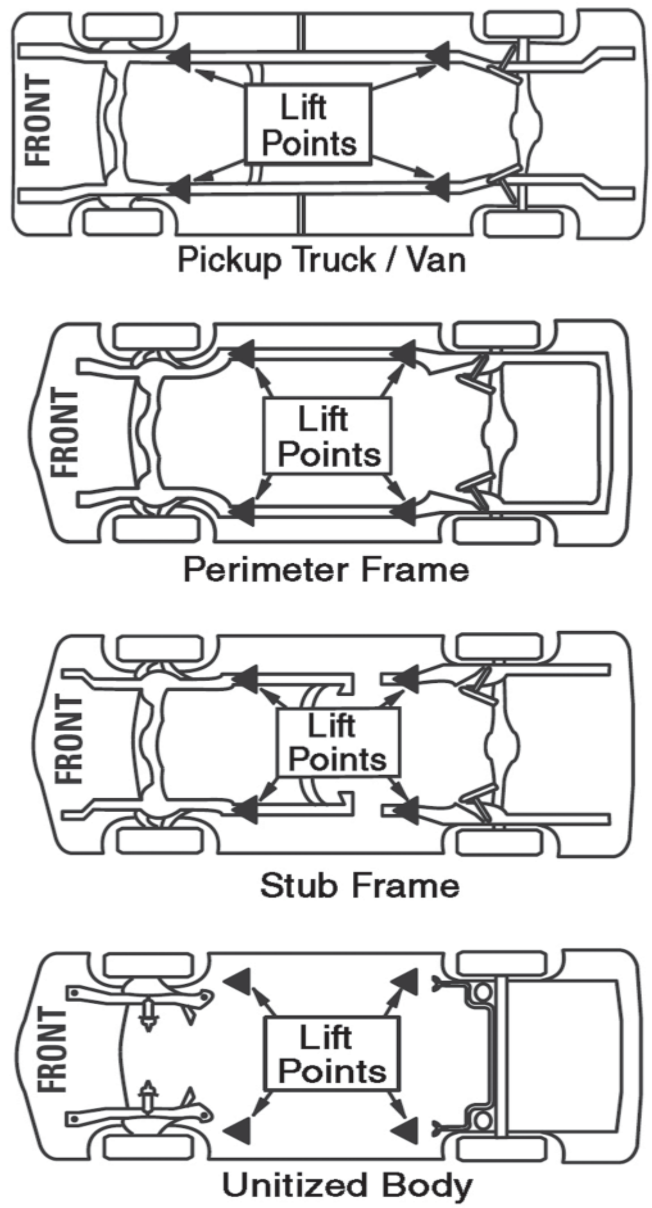
WARNING!
MANY SPECIALTY OR MODIFIED VEHICLES CANNOT BE RAISED ON A TWO-POST FRAME ENGAGING LIFT. CONTACT VEHICLE MANUFACTURER FOR RAISING OR JACKING DETAILS.

4. Position vehicle for proper weight distribution arms under vehicle to allow adapters to contact at the manufacturer's recommended pick up points.

5. If the specific vehicle lift points are not identified, or if the vehicle has additional or uniquely positioned payload, have a qualified person calculate the vehicle center of gravity or have the vehicle center of gravity determined at a vehicle scale. Load the vehicle with the enter of gravity midway between adapters.



TYPICAL LIFTING POINTS



6. Push the **RAISE** button or rotate the control switch on the power unit.

NOTE:
ALLOW (2) SECONDS BETWEEN MOTOR STARTS. FAILURE TO COMPLY MAY CAUSE MOTOR BURNOUT.

7. Stop before making contact with vehicle. Check arm restraint pins for engagement. If required, slightly move arm to allow restraint gear and pawl to mesh. **DO NOT** hammer arm restraint pin down as this will damage the restraint gear teeth.

8. Raise vehicle until tires clear the floor.

9. Stop and check adapters for secure contact at vehicle manufacturer's recommended lift points.

LIFT OPERATION SAFETY (CONT'D)

10. Continue to raise to desired height only if vehicle is secure on lift.

11. **DO NOT** go near or under a raised vehicle if all four adapters are not in secure contact with vehicle at vehicle manufacturer's recommended lift points.

12. Repeat entire loading and raising procedures if required.

13. Lower lift onto safety locks.

⚠ DANGER

DANGER!
VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.SUSPENSION COMPONENTS USED ON THIS LIFT ARE INTENDED TO RAISE AND LOWER LIFT ONLY AND ARE NOT MEANT TO BE LOAD HOLDING DEVICES. REMAIN CLEAR OF ELEVATED LIFT UNLESS VISUAL CONFIRMATION IS MADE THAT ALL PRIMARY SAFETY LOCKS ARE FULLY ENGAGED AND THE LIFT IS LOWERED ONTO THE SAFETY LOCKS, REFER TO INSTALLATION /OPERATION MANUAL FOR PROPER SAFETY

- **DO NOT** enter work area or go under vehicle if safety locks are not engaged.

- **CLEAR AREA** if vehicle is in danger of falling.

- **DO NOT** position yourself between a wall and the lift. If the vehicle falls in that direction, you may be severely injured or killed.
- Before attempting to lift pickup trucks or other truck frame vehicles, be sure that:

    ♦ Vehicle frame is strong enough to support its weight and has not been weakened by modification or corrosion.
    ♦ Vehicle individual axle weight does not exceed one-half lift capacity.
    ♦ Adapters are in secure contact with frame at vehicle manufacturers recommended lift points.
    ♦ Vehicle is stable on lift and the center of gravity is NOT off balance.
    ♦ The overhead switch bar will contact the highest point on the vehicle.

WHILE USING LIFT

- Avoid excessive rocking of vehicle while on lift.

- Always use safety stands as needed or when removing or installing heavy components.

TO LOWER THE LIFT

⚠ WARNING

WARNING!
WHEN LOWERING THE LIFT PAY CAREFUL ATTENTION THAT ALL PERSONNEL AND OBJECTS ARE KEPT CLEAR. ALWAYS KEEP A VISUAL LINE OF SITE ON THE LIFT AT ALL TIMES. ALWAYS MAKE SURE THAT ALL LOCKS ARE DISENGAGED. IF ONE OF THE LOCKS INADVERTENTLY LOCKS ON DESCENT THE LIFT AND/OR VEHICLE MAY DISRUPT CAUSING PERSONAL INJURY OR DEATH.

1. Remove all tools or other objects from the lift area.

2. Raise lift off safety locks. Make sure you raise the lift by at least two inches to allow adequate clearance for the locks to clear.

3. Push safety lock release handle fully and hold.

4. Push LOWERING valve handle to lower. Note: Both SAFETY LOCK release and LOWERING valve handles must be held down simultaneously to lower lift. Do not override self-closing lift controls.

5. Remain clear of lift when lowering vehicle. Observe pinch point warning decals.

6. Remove adapters from under vehicle and swing arms to full drive-thru position before moving vehicle.

7. If lift is not operating properly, DO NOT use until adjustment or repairs are made by qualified lift service personnel.

MAINTENANCE INSTRUCTIONS

⚠ CAUTION

CAUTION!
IF YOU ARE NOT COMPLETELY FAMILIAR WITH AUTOMOTIVE LIFT MAINTENANCE PROCEDURES; STOP AND CONTACT THE MANUFACTURER FOR INSTRUCTIONS. TO AVOID PERSONAL INJURY, PERMIT ONLY QUALIFIED PERSONNEL TO PERFORM MAINTENANCE ON THIS EQUIPMENT.

- Always keep bolts tight. Check periodically.

- Always keep lift components clean.

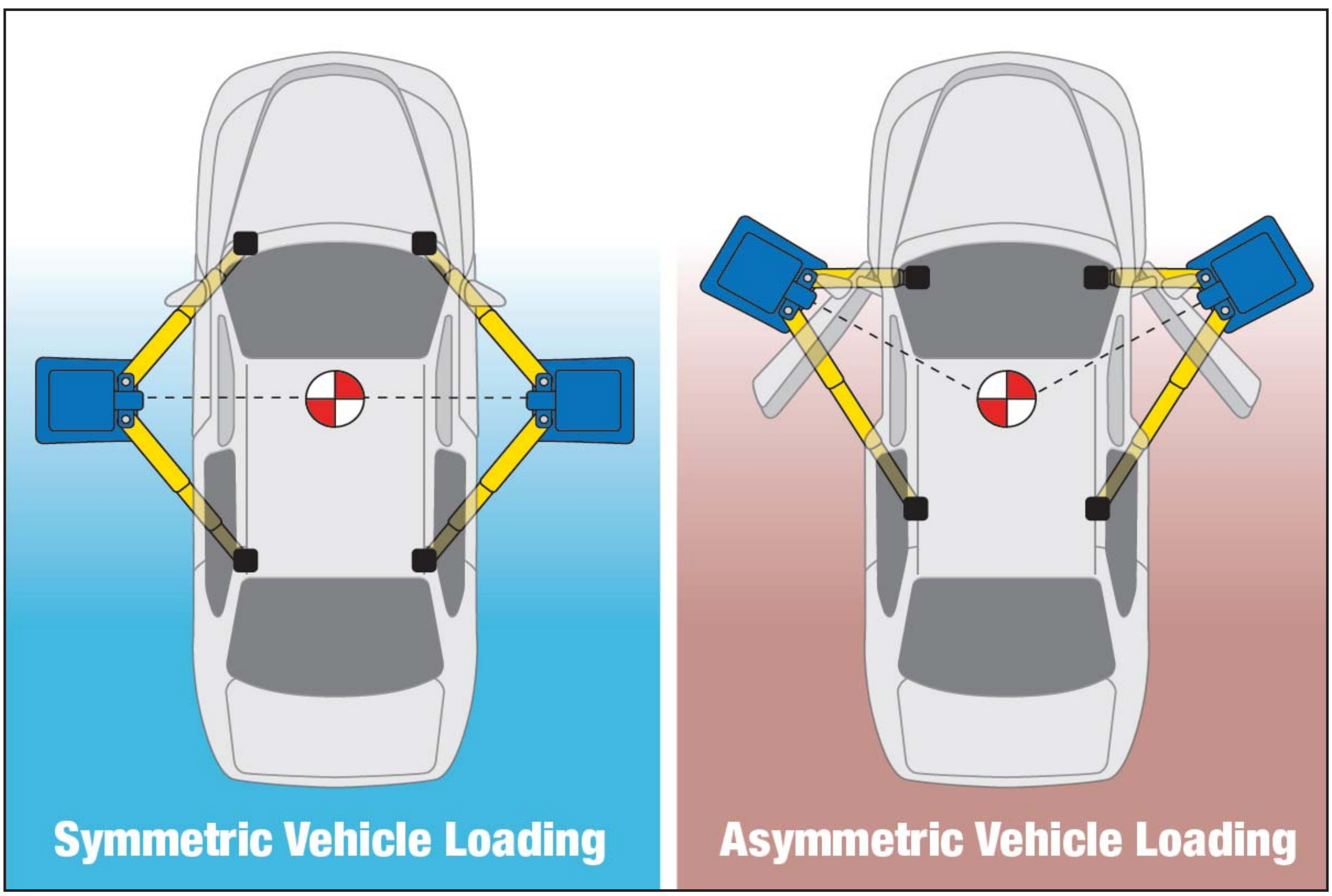
- Always if oil leakage is observed, call local service representative.

LIFT OPERATION SAFETY (CONT'D)

- Always call local service representative if electrical problems develop.
- Always replace ALL FAULTY PARTS before lift is put back into operation.
- Daily: Make a visual inspection of ALL MOVING PARTS and check for excessive signs of wear.
- Daily: Check safety locks to ensure they are in good operating condition.
- Daily: Check cables and sheaves for wear. Replace worn parts as required with genuine BendPak parts.
- Daily: Inspect adapters for damage or excessive wear. Replace as required with genuine BendPak parts.
- Weekly: Lubricate all sheave and rollers with general purpose oil.
- Weekly: Check all cable connections, bolts and pins to insure proper mounting.
- Monthly: Check equalizer cable tension. Adjust per lift installation instructions.
- Monthly: Lubricate locking latch shafts. Push latch handle several times for oil to penetrate pivot points.
- Every 3 Months: Check anchor bolt torque. Anchors should be torqued to 90 ft/lbs.
- Semi-Annually: Check fluid level of lift power unit and refill if required per lift installation instructions.
- Replace all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from BendPak.
- Refer to ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

⚠ WARNING

Make sure vehicle is neither front nor rear heavy and select the proper configuration for the vehicle to be lifted (symmetric/asymmetric) as shown below. Center of balance should be midway between adapters.



TO RAISE LIFT

- Read operating and safety manuals before using lift.
- Always lift a vehicle according to the manufacturers recommended lifting points.
- Position vehicle between posts.
- Adjust swing arms so that the vehicle is positioned with the center of gravity midway between pads.
- Use truck adapters as needed. Never exceed 9” of Pad height.
- **NEVER** use lift pad assemblies without rubber slip over pads in place.
- Raise the vehicle by depressing button until the vehicle just lifts off the ground. Re-check to make sure the vehicle is secure and all locking pins are lock in place.
- Raise vehicle to desired height. Lower vehicle onto nearest safety,
- Always ensure safeties are engaged before any attempt is made to work on or near vehicle.

TO LOWER THE LIFT

- First raise the lift in order to disengage the safeties.
- Release safeties by pushing on the safety handle.
- Be sure tool trays, stands or personnel are cleared from under the vehicle.
- Lower vehicle by activating lowering handle on power unit.
- Before removing vehicle from lift; position lift arms and supports to provide an unobstructed exit.
- **NEVER**, drive over lift arms.

REQUIRED MONTHLY MAINTENANCE

- Check all arm adjusting locks for proper operation.
- Check all cables connections, bolts and pins to insure proper mounting and torque.
- Visually inspect safeties for proper operation.
- Lubricate posts with grease.
- Inspect all anchors bolts and retighten if necessary.
- Check all posts for squareness and plumb.
- Inspect all pivot arms pins making sure they are properly secure.
- Check equalizer cable tension, and adjust if necessary.
- If lift is equipped with over head microswitch, check for proper operation.

⚠ WARNING

1. **WARNING!**: If cement anchor bolts are loose or any component of the lift is found to be defective,
   DO NOT USE THE LIFT!!
2. Never operate the lift with any person or equipment below the vehicle.
3. Never exceed the rated lift capacity.
4. Always ensure the safeties are engaged before any attempt is made to work on or near the vehicle.
5. Never leave lift in elevated position unless the safeties are engaged.
6. Do not permit electric motor to get wet! Motor damage caused by dampness is not covered under warranty.



NEVER LIFT ANY VEHICLE IN ANY MANNER WITH LESS THAN ALL FOUR (4) ARMS. RATED CAPACITY OF EACH LIFT ARM IS NO GREATER THAN ONE FOURTH (1/4) OF THE OVERALL LIFT CAPACITY.

⚠ WARNING

WIRE ROPE INSPECTION AND MAINTENANCE

♦ Lifting cables should be replaced every three - five years or when visible signs of damage are apparent. DO NOT USE LIFT WITH DEFECTIVE / WORN CABLES.

♦ Lifting cables should be maintained in a well-lubricated condition at all times. Wire rope is only fully protected when each wire strand is lubricated both internal and external. Excessive wear will shorten the life of the wire rope. The factory suggested wire rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand is 90-WT gear oil or ALMASOL® Wire Rope Lubricant. In order to make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.

♦ All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and/or guide rollers, the factory recommends 90-WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and/or swabbing.

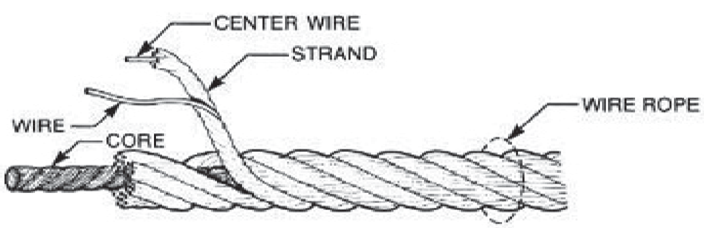
HOW OFTEN TO INSPECT

♦ Lifting cables should be visually inspected at least once each day when in use, as suggested by American Petroleum Institute (API) RP54 guidelines.

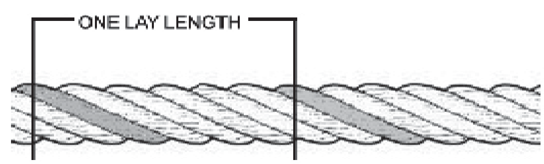
♦ Any lifting cables that have met the criteria for removal must be immediately replaced.

WHEN TO REPLACE LIFTING CABLES DUE TO BROKEN WIRES

♦ Lifting cables should be removed from service when you see six randomly distributed broken wires within any one lay length, or three broken wires in one strand within one lay length.



The three basic components of a typical wire rope.



OTHER REASONS TO REPLACE LIFTING CABLES

- ♦ Corrosion that pits the wires and/or connectors.
- ♦ Evidence of kinking, crushing, cutting, bird-caging or a popped core.
- ♦ Wear that exceeds 10% of a wire's original diameter.
- ♦ Evidence of heat damage.

HOW TO FIND BROKEN WIRES

♦ The first step is to relax your rope to a stationary position and move the pick-up points off the sheaves. Clean the surface of the rope with a cloth — a wire brush, if necessary — so you can see any breaks.

♦ Flex the rope to expose any broken wires hidden in the valleys between the strands.

♦ Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.

♦ With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.

⚠ WARNING

WIRE ROPE INSPECTION AND MAINTENANCE

- Lifting cables should be replaced every three years or when visible signs of damage are apparent. DO NOT USE LIFT WITH DEFECTIVE: WORN CABLES.

- Wire rope should be maintained in a well-lubricated condition at all times. Wire rope is only fully protected when each wire strand is lubricated both internally and externaly. Excessive wear will shorten the life of the wire rope. The factory suggested wire rope lubricant that penetrates to the core of the rope and provides long term lubrication between each individual strand is AMSOIL Synthetic Open Gear and Wire Rope Compound or 90WT gear oil or similar heavy lubricant. In order to make sure that the inner layers of the rope remains well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.

- All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and /or guide rollers, the factory recommends 90 WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and /or swabbing.

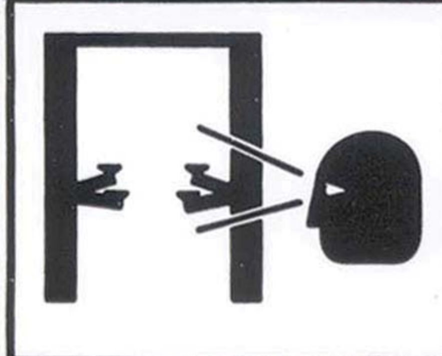
Failure to read, understand, and follow these instructions may cause death or serious injury. Read and understand these instructions before using lift.

SAFETY INSTRUCTIONS



Read operating and safety manuals before using lift. ©

SAFETY INSTRUCTIONS



Proper maintenance and inspection is necessary for safe operation. ©

SAFETY INSTRUCTIONS



Do not operate a damaged lift. ©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL 32903

 ALI/WL101a

⚠ CAUTION



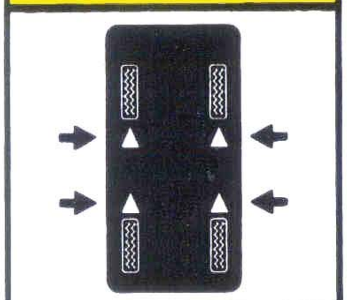
Lift to be used by trained operator only. ©

⚠ CAUTION



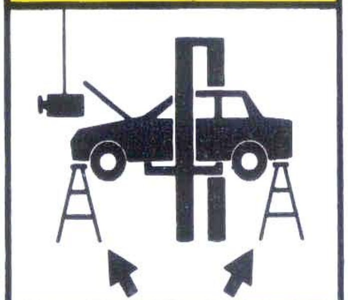
Authorized personnel only in lift area. ©

⚠ CAUTION



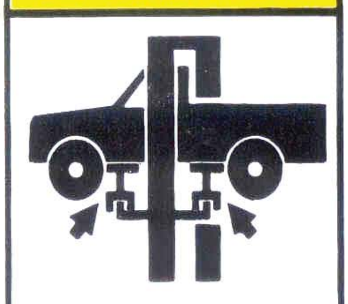
Use vehicle manufacturer's lift points. ©

⚠ CAUTION



Always use safety stands when removing or installing heavy components. ©

⚠ CAUTION



Use height extenders when necessary to ensure good contact. ©

⚠ CAUTION



Auxiliary adapters may reduce load capacity. ©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL. 32903.

⚠ WARNING



Clear area if vehicle is in danger of falling. ©

⚠ WARNING



Position vehicle with center of gravity midway between adapters. ©

⚠ WARNING



Remain clear of lift when raising or lowering vehicle. ©

⚠ WARNING



Avoid excessive rocking of vehicle while on lift. ©

⚠ WARNING



Do not override self-closing lift controls. ©

⚠ WARNING



Keep feet clear of lift while lowering. ©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL. 32903.

Safe Lift Operation

Automotive and truck lifts are critical to the operation and profitability of your business. The safe use of this and other lifts in your shop is critical in preventing employee injuries and damage to customer's vehicles. By operating lifts safely you can insure that your shop is profitable, productive and safe.
Safe operation of automotive lifts requires that only trained employees should be allowed to use the lift.

TRAINING SHOULD INCLUDE, BUT NOT LIMITED TO:

- Proper positioning of the vehicle on the lift arms. (See manufacturers minimize wheel base loading requirements.)
- Use of the operating controls.
- Understanding the lift capacity.
- Proper use of jack stands or other load supporting devices.
- Proper use, understanding and visual identification of safety lock devices and their operation.
- Reviewing the safety rules.
- Proper housekeeping procedures (lift area should be free of grease, oil, tools, equipment, trash, and other debris).
- A daily inspection of the lift should be completed prior to its use. Safety devices, operating controls, lift arms and other critical parts should be inspected prior to using the lift.
- All maintenance and repairs of the lift should be completed by following the manufacturer's requirements. Lift repair parts should meet or exceed OEM specifications. Repairs should only be completed by a qualified lift technician.
- The vehicle manufacturer's recommendations should be used for spotting and lifting the vehicle.

LIFT OPERATION / SAFETY

- It is important that you know the load limit. Be careful that you do not overload the lift . If you are unsure what the load limit is, check the data plate found on one of the lift columns or contact the manufacturer.
- The center of gravity should be followed closely to what the manufacturer recommends.
- Always make sure you have proper overhead clearance. Additionally, check that attachments, (vehicle signs, campers, antennas, etc.) are not in the way.
- Be sure that prior to the vehicle being raised, the doors, trunk, and hood are closed securely.
- Prior to being raised, make sure there is no one standing closer than six feet from the lift.
- After positioning the vehicle on the lift runways, set the emergency brake, make sure the ignition is off, the doors are closed, overhead obstructions are cleared, and the transmission is in neutral.
- Double check that the automatic chock devices are in position and then when the lift is raised, observe the chocks.
- Put pads or adapters in the right position under the contact points that have been recommended.
- The lift should be raised just until the vehicle's wheels are about one foot off the ground. If contact with the vehicle is uneven or it appears that the vehicle is not sitting secure, carefully lower the lift and readjust.
- Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, undercoating, etc.
- Pay attention when walking under a vehicle that is up on the hydraulic lift.

⚠ DANGER

- **DO NOT** leave the controls while the lift is still in motion.
- **DO NOT** stand directly in front of the vehicle or in the bay when vehicle is being loaded or driven into position.
- **DO NOT** go near vehicle or attempt to work on the vehicle when being raised or lowered.
- **REMAIN CLEAR** of lift when raising or lowering vehicle.
- **DO NOT** rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.
- **DO NOT** lower the vehicle until people, materials, and tools are clear
- **ALWAYS ENSURE** that the safeties are engaged and lowered on to the safeties before any attempt is made to work on or near vehicle.
- Some vehicle maintenance and repair activities may cause the vehicle to shift. Follow the manufacturer's guidelines when performing these operations. The use of jack stands or alternate lift points may be required when completing some repairs.
- **READ AND UNDERSTAND** all safety warning procedures before operating lift.
- **KEEP HANDS AND FEET CLEAR**. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
- **USE LIFT CORRECTLY**. Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
- **DO NOT** override self-closing lift controls.
- **CLEAR AREA** if vehicle is on danger of falling.
- **STAY ALERT**. Watch what you are doing. Use common sense. Be aware.
- **CHECK FOR DAMAGED PARTS**. Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
- **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
- When the lift is being lowered, make sure everyone is standing at least six feet away.
- Be sure there are no jacks, tools, equipment, left under the lift before lowering.
- Always lower the vehicle down slowly and smoothly.

LIFT WILL NOT RAISE

POSSIBLE CAUSE

1. Air in oil, (1,2,8,13)
2. Cylinder binding, (9)
3. Cylinder leaks internally, (9)
4. Motor run backward under pressure, (11)
5. Lowering valve leaks, (3,4,6,10,11)
6. Motor runs backwards, (7,14,11)
7. Pump damaged, (10,11)
8. Pump won't prime, (1,8,13,14,3,12,10,11)
9. Relief valve leaks, (10,11)
10. Voltage to motor incorrect, (7,14,11)

REMEDY	***INSTRUCTION***
1. Check for proper oil level.	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Bleed cylinders.	See Installation Manual
3. Flush release valve to get rid of. possible contamination	Hold release handle down and start unit allowing it to run for 15 seconds.
4. Dirty oil.	Replace oil with clean Dexron ATF.
5. Tighten all fasteners.	Tighten fasteners to recommended torques.
6. Check for free movement of release.	If handle does not move freely, replace bracket or handle assembly.
7. Check if motor is wired correctly.	Compare wiring of motor to electrical diagram on drawing.
8. Oil seal damaged or cocked	Replace oil seal around pump shaft.
9. See Installation Manual	Contact BendPak Customer Support.
10. Replace with new part	Replace with new part.
11. Return unit for repair	Return unit for repair.
12. Check pump-mounting bolts	Bolts should be 15 to 18 ft. lbs.
13. Inlet screen clogged	Clean inlet screen or replace.
14. Check wall outlet voltages and wiring	Make sure unit and wall outlet are wired properly.

MOTOR WILL NOT RUN

POSSIBLE CAUSE

1. Fuse blown, (5,2,1,3,4)
2. Limit switch burned out, (1,2,3,4)
3. Microswitch burned out, (1,2,3,4)
4. Motor burned out, (1,2,3,4,6)
5. Voltage to motor incorrect, (2,1,8)

REMEDY	***INSTRUCTION***
1. Check for correct voltage	Compare supply voltage with voltage on motor name tag. Check that the wire is sized correctly. N.E.C. table 310-12 requires AWG 10 for 25 Amps.
2. Check motor is wired correctly	Compare wiring of motor to electrical diagram on drawing.
3. Don't use extension cords	According to N.E.C. : " The size of the conductors… should be such that the voltage drop would not exceed 3% to the farthest outlet for power…" Do not run motor at 115 VAC – damage to the motor will occur.
4. Replace with new part	Replace with new part.
5. Reset circuit breaker/fuse	Reset circuit breaker/fuse.
6. Return unit for repair	Return unit for repair.
7. See Installation Manual	See Installation Manual.
8. Check wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly. Motor must run at 208/230 VAC.

LIFT LOWERS SLOWLY OR NOT AT ALL

POSSIBLE CAUSE

1. Cylinders binding, (1)
2. Release valve clogged, (5,4,2,3)
3. Pressure fitting too long, (6)

REMEDY	***INSTRUCTION***
1. See Installation Manual	Contact BendPak Customer Support.
2. Replace with new part	Replace with new part.
3. Return for repair	Return for repair.
4. Check oil.	Use clean 10-WT hydraulic oil or Dexron-III automatic transmission fluid only. If ATF is contaminated, replace with clean ATF and clean entire system.
5. Clean release valve	Wash release valve in solvent and blow out with air.
6. Replace fitting with short thread lead	Replace fitting with short thread lead.

WILL NOT RAISE LOADED LIFT

POSSIBLE CAUSE

1. Air in oil, (1,2,3,4)
2. Cylinder binding, (5)
3. Cylinder leaks internally, (5)
4. Lift overloaded, (6,5)
5. Lowering valve leaks, (7,8,1,5,9)
6. Motor runs backwards, (10,12,9)
7. Pump damaged, (5,9)
8. Pump won't prime, (1,2,3,4,5,11,9)
9. Relief valve leaks, (8,5,9)
10. Voltage to motor incorrect, (10,12,5)

REMEDY	***INSTRUCTION***
1. Check oil level	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Check/Tighten inlet tubes	Replace inlet hose assembly.
3. Oil seal damaged or cocked	Replace oil seal and install.
4. Bleed cylinders	See Installation Manual.
5. See Installation Manual	Contact BendPak Customer Support.
6. Check vehicle weight	Compare weight of vehicle to weight limit of the lift.
7. Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
8. Replace with new part	Replace with new part.
9. Return unit for repair	Return unit for repair.
10. Check motor is wired correctly	Compare wiring of motor to electrical diagram on power unit drawing.
11. Inlet screen clogged	Clean inlet screen or replace.
12. Check wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly.

LIFT WILL NOT STAY UP

POSSIBLE CAUSE

1. Air in oil, (1,2,3)
2. Check valve leaks, (6)
3. Cylinders leak internally, (7)
4. Lowering valve leaks, (4,5,1,7,6)
5. Leaking fittings, (8)

REMEDY	***INSTRUCTION***
1. Check oil level	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Oil seal damaged and cocked	Replace oil seal around pump shaft.
3. Bleed cylinder	Refer to Installation Manual.
4. Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
5. Replace with new valve	Replace with new valve.
6. Return unit for repair	Return unit for repair.
7. See Installation Manual	Contact BendPak Customer Support.
8. Check complete hydraulic system for leaks.	Tighten all hydraulics fittings and inspects all hoses.

MAINTENANCE RECORDS

INSTALLATION FORM

Customer Name:		Date of Installation:
Company Name:		
Street Address:		
City:	State:	Zip:
Phone:	Fax:	

Pre-Install Agreement

I, (the undersigned) acting as the owner of the business listed above assume responsibility for any permits required, either state or county mandated, related to the installation and/or operation of this equipment. I assume responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are installed. I will assume all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with, or to have arisen out of the condition and/or drilling of the concrete near or adjacent to the equipment model(s) listed above. If my employee(s) offer assistance of any kind during installation of the above equipment model(s) I hold the manufacturer and installation company harmless of all liability for losses, damages, expenses, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with the installation of the above equipment model(s).

I understand that the lifts above are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

Customer Signature: Print Name: Date:

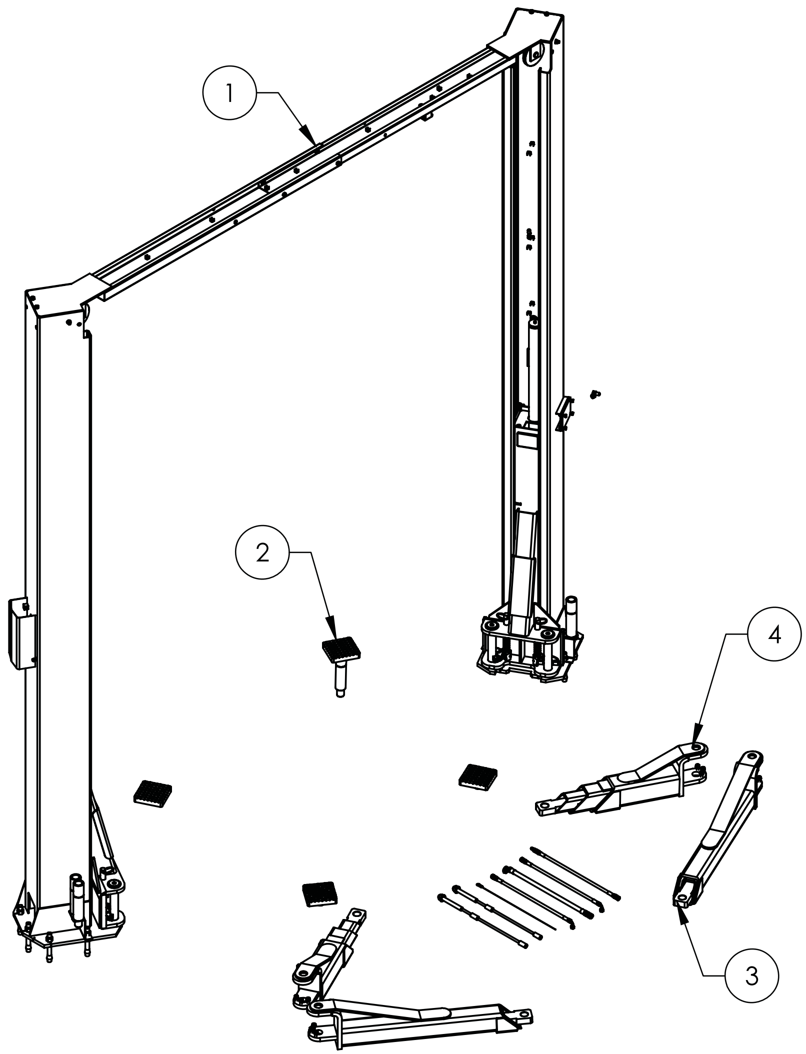
Post-Installation Check-Off

- ☐ Base and Columns Properly Shimmed And Stable
- ☐ Anchor Bolts Tightened
- ☐ Runways Properly Attached and Secured
- ☐ Electric Power Supply Confirmed
- ☐ Cables / Chains Adjusted Properly
- ☐ Safety Locks Functioning Properly
- ☐ Check For Hydraulic Leaks
- ☐ Oil Level
- ☐ Lubrication of Critical Components
- ☐ Lift Adapters
- ☐ Check For Overhead Obstructions
- ☐ Runways Level
- ☐ All Screws, Bolts, and Pins Secured
- ☐ Surrounding Area and Lift Clean In Appearance
- ☐ Proper Operation, Maintenance and Safety Explained
- ☐ Operation and Safety Manual(s) Left at Site

I, (the undersigned) confirm that the above installation procedure(s) were completed. I understand that I will be responsible for maintaining this equipment as outlined in the accompanied ***Installation and Operation Manual*** and ***ANSI/ALI ALOIM Safety Requirements for Operation, Inspection and Maintenance***. I understand that personal injury and/or damage to property can occur if the above equipment model(s) are not maintained or used improperly and take full responsibility for training my employees on proper use and maintenance of this equipment. I hold the manufacturer and installation company harmless of all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or related to improper use, improper training, or lack of required maintenance. I understand that the warranty does not cover replacement of parts worn or damaged due to normal use or lack of required maintenance

Customer Signature: Print Name: Date:

Installer Signature:	Print Name:	Date:
Installer Company Name:		
Street Address:		
City:	State:	Zip:
Phone:	Phone (Other):	



NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING

ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5245228	XPR-10A LIFT SUPERSTRUCTURE	1	A
2	5250322	XPR-10A PARTS BOX	1	A
3	5210171	XPR-10AC/ACX LOW PROFILE LONG ARM ASSEMBLY	2	C
4	5210170	XPR-9F/FD/FS/ 10C/AC LOW PROFILE TRIPLE TELESCOPING ARM ASSEMBLY	2	C

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	TM	09/02/2010
CHECKED	AC	09/20/2010

THIRD ANGLE PROJECTION

BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

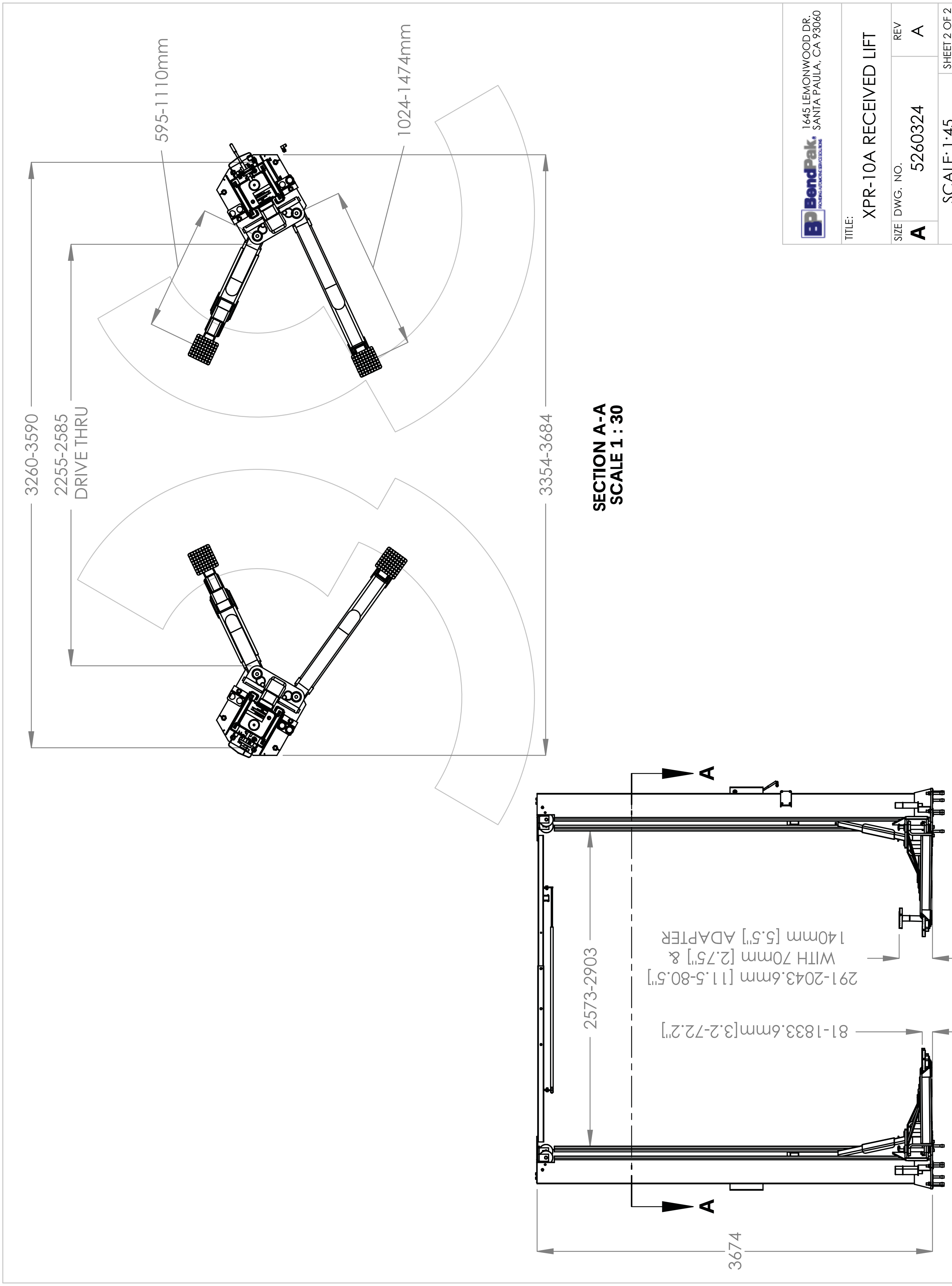
TITLE: XPR-10A RECEIVED LIFT

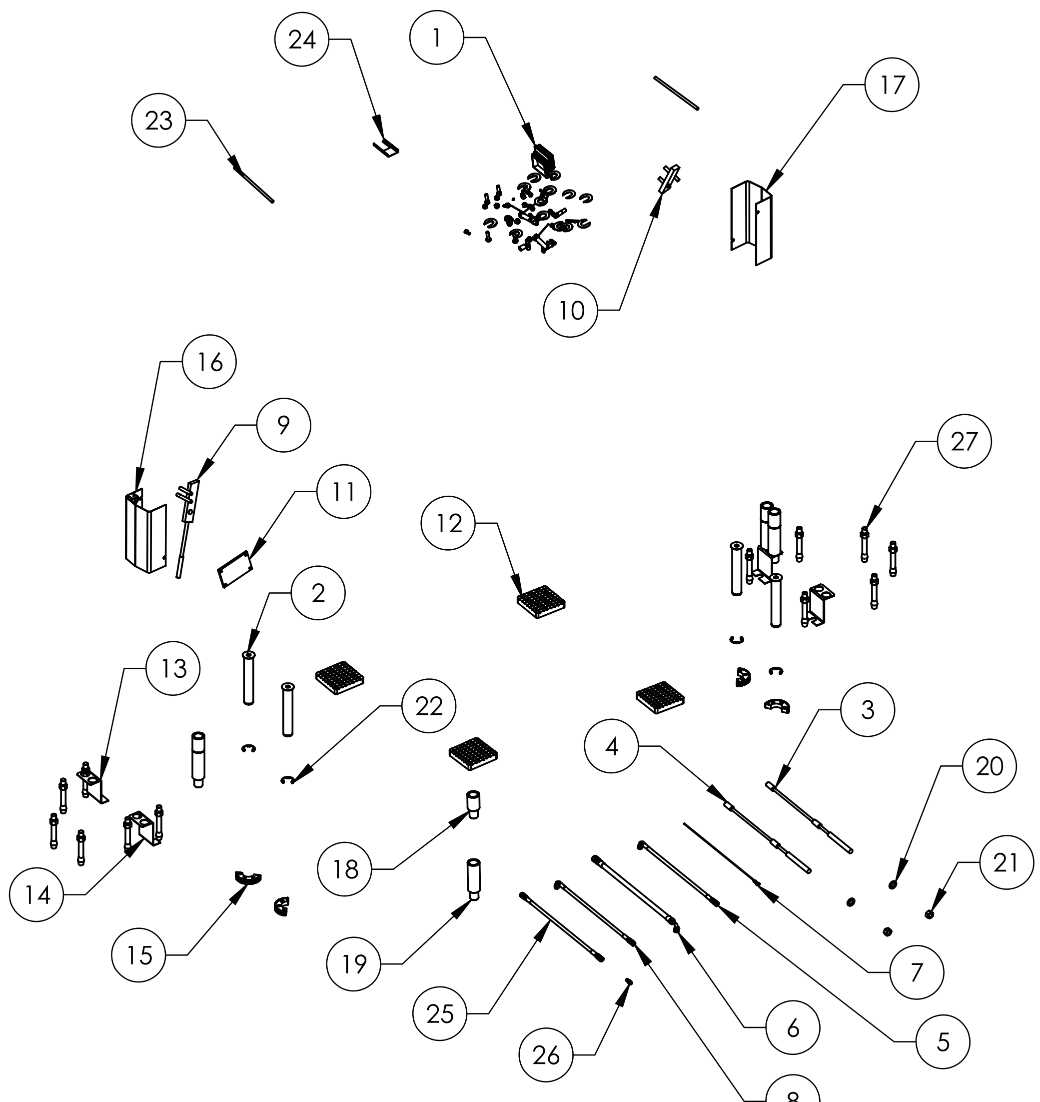
MATERIAL: ---

SIZE: ---

SIZE: A | DWG. NO. 5260324 | REV A

SCALE: 1:35 | SHEET 1 OF 2


3260-3590
2255-2585
DRIVE THRU
595-1110mm
1024-1474mm
3354-3684
SECTION A-A
SCALE 1 : 30
A
A
2573-2903
291-2043.6mm [11.5-80.5"]
WITH 70mm [2.75"] &
140mm [5.5"] ADAPTER
81-1833.6mm[3.2-72.2"]
3674
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060
TITLE:
XPR-10A RECEIVED LIFT
SIZE
A
DWG. NO.
5260324
REV
A
SCALE: 1:45
SHEET 2 OF 2



ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5174518	XPR-10/12C/15C/18C PARTS BAG	1	C
2	5505116	MX-10, XPR-7/9/10 LIFT HEAD PIN WELDMENT	4	B
3	5595366	XPR-10A CABLE ASSEMBLY Ø10 x 10014mm DBST	1	A
4	5595358	XPR-10A CABLE ASSEMBLY Ø10 x 10130mm DBST	1	A
5	5570832	XP/XPR/MX HYDRAULIC HOSE ASSY Ø6.35 x 2299mm SB	1	B
6	5570017	XP/XPR HYDRAULIC HOSE ASSY Ø10 x 1219mm SB	1	A
7	5595047	XP/XPR-10ACX/CX, XPR-7TR Ø2.4 x 7747 SAFETY CABLE	1	B
8	5570038	XP/XPR-10C/AC HYDRAULIC HOSE ASSY Ø6.35 x 8040 SB	1	B
9	5210007	XP/XPR POWER SIDE SAFEY ASSEMBLY	1	B
10	5210010	XP/XPR OFF SIDE SAFETY WELDMENT	1	B
11	5715003	POWER UNIT VIBRATION DAMPENER	1	B
12	5215250	MD-6XP, ALL XP/XPR SLIP ON LIFT PAD ASSEMBLY	4	B
13	5730663	XP/XPR-9/10, XPR-7 POST ASSEMBLY LIFT HEAD FOOT GUARD R.H.	2	B
14	5730664	XP/XPR-9/10, XPR-7 POST ASSEMBLY LIFT HEAD FOOT GUARD L.H.	2	B
15	5736171	MX, XPR-9/10 BOLT ON ARM RESTRAINT GEAR	4	B
16	5600163	XPR-7TR/10/12C/15/18C POWER SIDE SAFETY COVER	1	B
17	5210009	XP/XPR-7TR/7TRFD/ 9FD/9FDX/10/12/12FD/15/18C OFF SIDE SAFETY COVER	1	B
18	5746390	XP/XPR/RJ/MX/MD-6XP SHORT LIFT PAD EXTENSION (113mm LG.)	4	A
19	5746395	MX/XP/XPR LONG LIFT PAD EXTENSION (182mm LG.)	4	A
20	5545342	WASHER M18 FLAT	2	-
21	5535358	NUT M18 x 2.5 NL	2	-
22	5540129	E RING Ø38mm OD	4	-
23	5746167	DOUBLE THREADED ROD M10 x 1.5 x 275	2	B
24	5700400	MX/XP/XPR MICROSWITCH COVER PLATE	1	A
25	5570176	XPR-9D/10/10A HYDRAULIC HOSE EXTENSION ASSY Ø6.35 x 330mm DS	1	A
26	5550095	FTG NPL -04 JIC x -04 JIC	1	-
27	5530307	AB 3/4" x 5"	12	-

NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. INSERT PARTS BAG INTO PARTS BOX FOR SHIPMENT
3. THREAD 5535358 WITH 5545342 ONTO CABLES FOR SHIPMENT
4. HOSES AND CABLES IN REPRESENTATIONAL FORM

NEXT ASSEMBLY
5260324

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	TM	08/30/2010
CHECKED	AC	09/20/2010

THIRD ANGLE PROJECTION

MATERIAL: ---

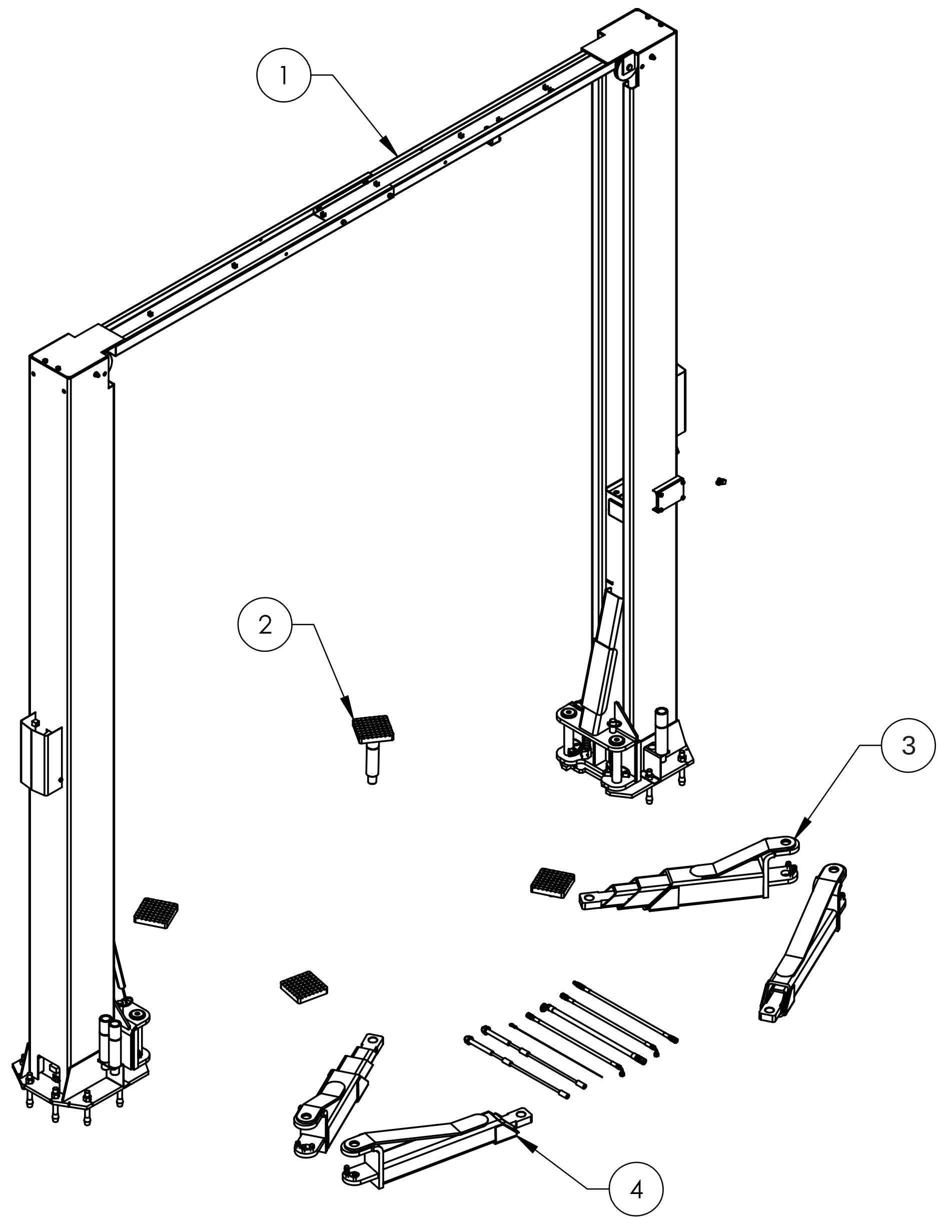
SIZE: ---

BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

TITLE: XPR-10A PARTS BOX

SIZE: A | DWG. NO. 5250322 | REV A

SCALE: 1:30 | SHEET 1 OF 1



	PART NUMBER	DESCRIPTION	QTY	REV
1		XPR-10 LIFT SUPERSTRUCTURE	1	A
2		XPR-10 PARTS BOX	1	A
3		XPR-9FX/FDX/FSX/ 10ACX/10CX LOW PROFILE TRIPLE TELESCOPING ARM ASSEMBLY	2	C
4		XPR-9/10C/CX LOW PROFILE MEDIUM ARM	2	C

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	TM	09/02/2010
CHECKED	AC	09/20/2010

THIRD ANGLE PROJECTION

MATERIAL: ---

SIZE: ---

BendPak 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

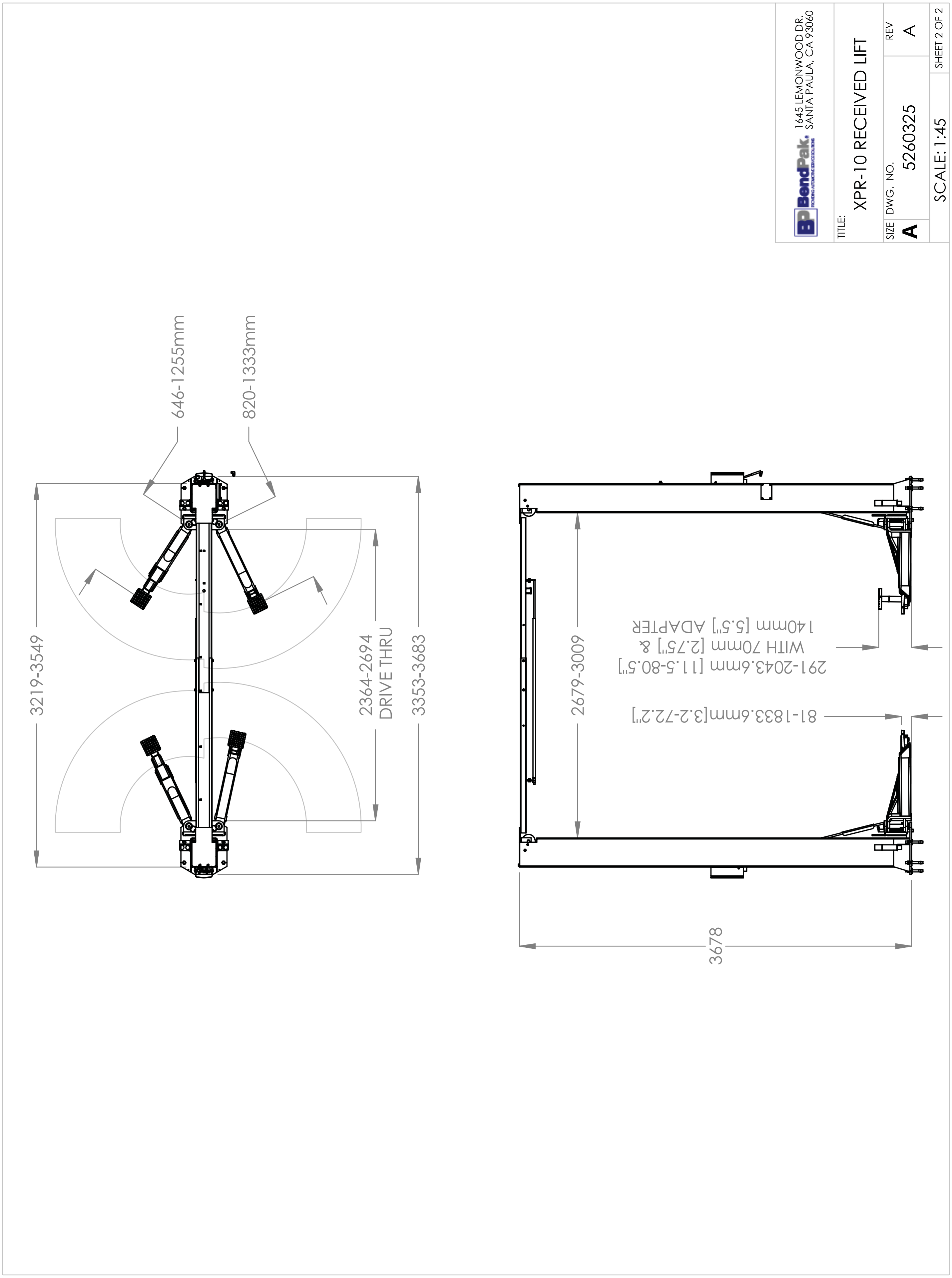
TITLE: XPR-10 RECEIVED LIFT

SIZE A DWG. NO. 5260325 REV A

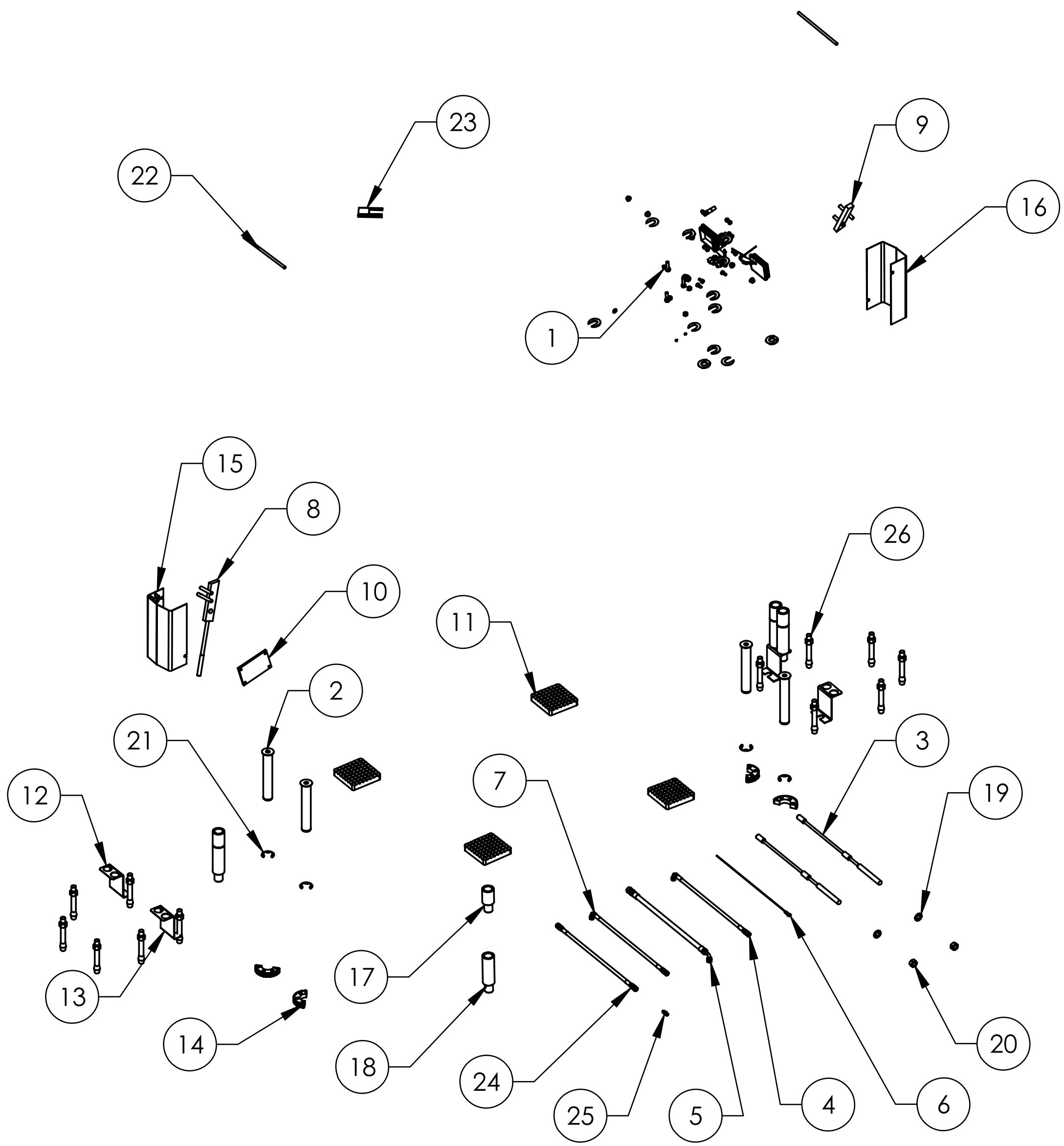
SCALE: 1:30 SHEET 1 OF 2

NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING



BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060
TITLE:
XPR-10 RECEIVED LIFT
SIZE
A
DWG. NO.
5260325
REV
A
SCALE: 1:45
SHEET 2 OF 2
646-1255mm
820-1333mm
3219-3549
2364-2694
DRIVE THRU
3353-3683
2679-3009
291-2043.6mm [11.5-80.5"]
WITH 70mm [2.75"] &
140mm [5.5"] ADAPTER
81-1833.6mm[3.2-72.2"]
3678



ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5174518	XPR-10/12C/15C/18C PARTS BAG	1	C
2	5505116	MX-10, XPR-7/9/10 LIFT HEAD PIN WELDMENT	4	B
3	5595367	XPR-10 CABLE ASSEMBLY Ø10 x 10076mm DBST	2	A
4	5570832	XP/XPR/MX HYDRAULIC HOSE ASSY Ø6.35 x 2299mm SB	1	B
5	5570017	XP/XPR HYDRAULIC HOSE ASSY Ø10 x 1219mm SB	1	A
6	5595047	XP/XPR-10ACX/CX, XPR-7TR Ø2.4 x 7747 SAFETY CABLE	1	B
7	5570038	XP/XPR-10C/AC HYDRAULIC HOSE ASSY Ø6.35 x 8040 SB	1	B
8	5210007	XP/XPR POWER SIDE SAFEY ASSEMBLY	1	B
9	5210010	XP/XPR OFF SIDE SAFETY WELDMENT	1	B
10	5715003	POWER UNIT VIBRATION DAMPENER	1	B
11	5215250	MD-6XP, ALL XP/XPR SLIP ON LIFT PAD ASSEMBLY	4	B
12	5730663	XP/XPR-9/10, XPR-7 POST ASSEMBLY LIFT HEAD FOOT GUARD R.H.	2	B
13	5730664	XP/XPR-9/10, XPR-7 POST ASSEMBLY LIFT HEAD FOOT GUARD L.H.	2	B
14	5736171	MX, XPR-9/10 BOLT ON ARM RESTRAINT GEAR	4	B
15	5600163	XPR-7TR/10/12C/15/18C POWER SIDE SAFETY COVER	1	B
16	5210009	XP/XPR-7TR/7TRFD/ 9FD/9FDX/10/12/12FD/15/18C OFF SIDE SAFETY COVER	1	B
17	5746390	XP/XPR/RJ/MX/MD-6XP SHORT LIFT PAD EXTENSION (113mm LG.)	4	A
18	5746395	MX/XP/XPR LONG LIFT PAD EXTENSION (182mm LG.)	4	A
19	5545342	WASHER M18 FLAT	2	-
20	5535358	NUT M18 x 2.5 NL	2	-
21	5540129	E RING Ø38mm OD	4	-
22	5746167	DOUBLE THREADED ROD M10 x 1.5 x 275	2	B
23	5700400	MX/XP/XPR MICROSWITCH COVER PLATE	1	A
24	5570176	XPR-9D/10/10A HYDRAULIC HOSE EXTENSION ASSY Ø6.35 x 330mm DS	1	A
25	5550095	FTG NPL -04 JIC x -04 JIC	1	-
26	5530307	AB 3/4" x 5"	12	-

NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. INSERT PARTS BAG INTO PARTS BOX FOR SHIPMENT
3. THREAD 5535358 WITH 5545342 ONTO CABLES FOR SHIPMENT
4. HOSES AND CABLES IN REPRESENTATIONAL FORM

NEXT ASSEMBLY 5260325

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	TM	08/30/2010
CHECKED	AC	09/20/2010

THIRD ANGLE PROJECTION

MATERIAL: ---

SIZE: ---

BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

TITLE: XPR-10 PARTS BOX

SIZE A | DWG. NO. 5250323 | REV A

SCALE: 1:30 | SHEET 1 OF 1



For Parts Or Service
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